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AND

An Engliſh Spelling Dictionary.

The whole calculated to qualify Perſons for Buſineſs without the Help of a Maſter, and illuſtrated with a Map of the World.

By THOMAS WISE, *Accomptant.*

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BRITISH MUSEUM
15 MAR 83

THE CONTENTS

A Compendious Engliſh Grammar Page 1.
Directions for Writing 11.
How to make a pen 15
A receipt for the beſt black ink 16
To make London ink powder ib
To make Japan or ſhining ink ib
A powder ink to rub on paper and write on 17
How to make red ink ib
To keep ink from freezing or moulding ..

Copies for Writing.

Single line copies in proſe in an alphabetical order ib
Copies in verſe 25
Of the points, or ſtops, and other marks uſed in writing and reading, with their characters, places, and ſignifications 26
Of abbreviations 28
To write on paper gold letters called ſhell gold 30
How to write ſecret letters ib
Another way to write ſecret letters 31
How to write both blue and red letters at once, with the ſame ink and pen, and upon the ſame paper ib
A poem in praiſe of writing 32
A curious collection of letters on compliment, buſineſs, and ſeveral other occaſions ib

Precedents in Law and Buſineſs.

Superſcriptions for letters 63
Directions for the beginning of letters 64.

CONTENTS.

Of wills and teſtaments. Page 64
Form of a will 65
Another will 66
Obſervations concerning wills and teſtaments 67
The form of a letter of attorney, to execute a particular buſineſs 68
A form of a revocation of a letter of attorney 69
The form of an indenture ib
A letter of attorney from a ſeaman 70
A bond and the condition 71
A condition to ſtand to the award of arbitrators 72
The form of an umpirage of award 73
A letter of licence to a debtor ib
A bill of ſale 75
A general releaſe 76
Of wives, children and ſervants ib
Of ſons and daughters 78
Of ſervants 79

Forms of Receipts, Bills, Notes, &c.

Various forms of acquittances, when an apprentice or ſervant receives money for the uſe of his maſter or employer 79
Forms of acquittances, upon receipt of money, by maſters and men of buſineſs 81
Promiſſory notes by bankers apprentices and ſervants 82
Promiſſory notes for a man's ſelf 83
A bill of debt 84
Another ib
Promiſſory notes 85
Arithmetic in all its branches 86
The menſuration of plain ſuperficies (or flat meaſure) ſuch as board, glaſs, wainſcot, painting and the like 205
A ſhort and eaſy method of book-keeping, after the Italian manner 206
Accompts ready caſt up for buying or ſelling any commodity by number, weight or meaſure 233

CONTENTS.

The use of the tables with examples Page 242

A compendium of geography 243
A table shewing the parallel of latitude, the breadth and length of the day in every climate 244
A description of the world 245
Europe 249
Asia 257
Africa 261
America 264
British islands 267
An account of the several counties of England, with their produce, market towns and market days 268
The management of horses 298
Rules for buying horses ib
Rules for travelling, with directions for preventing and curing the diseases horses are incident to on the road 300
How to save a horse's back from galling 302
On the navel gall 303
How to cure a crush on the navel gall ib
Of swelled legs 304
Of scratches 305
Of gravel in the hoof 306
On a clap in the back sinews 307
Of strains in the fillets 309
Of windgalls ib
Of colds 310
Of couring or immoderate purging 312
Of a cold in the head 313
Of a hurt on the eye 314
Of a swelled neck 315
Of the gravel 316

The art of painting in oil 317

A catalogue of the ſeveral colours uſed therein 317
How to make ſize for the gilding both with gold and ſilver 319
The art of working oil colours, and painting timber work; after the manner of common painting 320
What colours are moſt ſuitable and ſet off beſt with each other 322
Of ſome colours that ariſe from mixture 323
How to gild with gold on an oily ſize either letters or figures; &c. 324
How to gild with ſilver 325
Some directions for mixing of oil colours for divers purpoſes, in the art of colouring prints with oil colours 326
Colours for faces ib
——— for hair ib
——— for garments 327
——— for trees ib
——— for grounds behind a picture 328
——— for ground in a landskip ib
Sky colours ib
The whole art and myſtery of colouring maps and other prints in water colours ib
Of the practice of colouring maps 332
Directions how to lay on metzotinto prints on glaſs 333
Exports and imports of Great Britain to and from foreign nations 334
Alphabetical liſt of Engliſh manufactures, with the beſt markets for the purchaſe of them 339
Tables ſhewing the value of Portugal pieces, &c. in pounds, ſhillings and pence ſterling 342
Tables of the two great roads from Edinburgh to London 344
Curious fire works 345
An Engliſh ſpelling dictionary 356

BRITISH MUSEUM 15 63 MAR

A COMPENDIOUS

ENGLISH GRAMMAR.

GRAMMAR, in any language, is that art or ſcience that teacheth the true and proper uſe of letters, ſyllables, words and ſentences. And tho' ſeveral rules and obſervations, applicable only to one particular ſpeech or tongue, are different from thoſe of another, yet ſuch as concern the general relation that things have to their modes, qualities, motions or paſſions, are exactly the ſame in all the languages in the world; for any name, quality, &c. in the Engliſh language is the ſame in any other, though expreſſed in a different term. From whence may be perceived, how far the generality of people are miſtaken, in the notion they have, that it is abſolutely neceſſary for all young perſons to read the Latin or Lilly's grammar, before they can attain to a right underſtanding of the Engliſh: for all the grammars of the Latin tongue are moſtly employed to teach the various terminations, &c. of the flections, modes, formations, and words of that language, a matter which no way concerns the Engliſh. But there are ſome few general rules in that and all other grammars that may be applied to the Engliſh, or any other language whatever.

I ſhall not here enter into a critical diſſertation upon each letter, divide them into vowels, conſonants, mutes, liquids, &c. nor ſhall I divide the language into eight parts, as is generally done, but into four, *viz.*

NAMES. | AFFIRMATIONS.
QUALITIES | PARTICLES, or the manner of words.

Names expreſs the things themſelves, *i. e.* every thing that is the object of our ſeveral ſenſes, reflexion, and underſtanding: which conveying ſome certain idea or image to the mind, want not the help of any other word to make them underſtood: as when we hear any one ſay, *a man*, *a horſe*, *virtue*, *vice*, &c. we perfectly underſtand what he means.

Names expreſs the things themſelves, you cannot therefore put the word *thing* after them thus, *man thing*, *virtue thing*, &c. without making nonſenſe.

They admit of *a* or *the* before them, and *an* when they begin with a vowel.

There are two ſort of Names, Common Names are ſuch as agree to, or expreſs the whole ſpecies; as the name *horſe* ſignifies *my horſe*, *your horſe*, and all the *horſes*, that are.

Proper Names diſtinguiſh particulars of the ſpecies from each other, as *Cæſar*, *Pompey*, *Cato*, diſtinguiſh thoſe men from the reſt of mankind. The ſame holds of the proper names of *cities*, *towns*, *mountains*, *rivers*, *countries*, &c.

Qualities are the manners of Names, or things expreſſed by them, as *good*, *bad*, *round*, *ſquare*, &c. For example: the being of *wax*, is the ſubſtance of *wax*, or *wax* itſelf, without regard to any form or colour, and is what we call the name the roundneſs, ſquareneſs, *&c.* of the figure are the manners of the being; as to be ignorant or knowing, are the manners or qualities of our being: thus we ſay a *good*, *bad*, *black*, *white* &c horſe: *horſe*. is the name, and *good*, *bad*, *black*, *white*, &c. are the qualities of that name.

The 3*d* general head is the Affirmation, under which term of exiſtence, action, or paſſion of the ſubject is affirmed, as *the black horſe runs*, *the common ſewer ſtinks*, *the young child cries*. Here *black*, *common* and *young* are qualities, as expreſſing ſome mode or quality of their ſubjects or names, *horſe*, *ſewer*, and *child*; and the words *runs*, *ſtinks*, and *cries* denoting the ſeveral actions of their ſubjects or [illegible] It is uſual to call

BRITISH MUSEUM 15 63 MAR

these by three different appellations, viz. *substantive*, *active* and *passive*; those that are found to signify the being or existence of any thing, as *I am*, &c. are termed *substantives*: those that signify the acting or doing of any thing, as *I see*, &c. are termed *actives*; where passion or the suffering of any thing is signified, as *I am seen* &c. they are *passives*.

The *4th* class of words I call by the general name of Particles, which are occasionally made use of to make the sense of the speaker more full, clear, and intelligible, by expressing the manner, or other circumstances of the other words, either by connecting them together, or shewing the manners or qualities of them; *viz. John and Mary strive earnestly*; here *and earnestly* are *particles*; *and* joining the two names *John*, *Mary*; *earnestly* shewing the mode of their striving.

A substantive has what is called two *numbers*, the one expressing only some one single thing of a sort or species, as *a man*, the other all above one, as *men*, viz. two, three, twenty, a thousand, &c. and this is called the plural number. The singular number is commonly distinguished by *a*, *an*, or *one*; as *a horse*, *a man*, *an image*, *an ideot*, *one child*, *one wife*, &c. The plural number is generally known by the words terminating with an *s*, or *es*; but the singular never, but in such as have a plural termination, tho' they have a singular meaning; as, *arm*, *arms*: *horse*, *horses*: *king*, *kings*, *stone*, *stones*, &c.

There are some exceptions to this general rule, but they are few in comparison to those that it comprehends; such as *ox*, *oxen*; *man*, *men*; *brother*, *brethren*; *cow*, *cows*, or *kine*: *mouse*, *mice*: *foot*, *feet*: *tooth*, *teeth*: *penny*, *pence*, &c. Singulars which end in *f* or *fe*, have their plurals ending in *ves*; as *wife*, *wives*: *self*, *selves*; *knife*, *knives*: *wolf*, *wolves*, &c. And tho' most words, whose singulars end in *ff*, follow the general rule aforegoing, as *muff*, *muffs*, &c. yet *staff* makes *staves*, according to the latter rule.

Some terminate alike in both numbers, as *one sheep*: *ten sheep*: *one swine*, *ten swine*, &c.

There are some words that admit of no singular number, such as *ashes*, *bowels*, *cresses*, &c. And on the con-

trary there are a great many that want the plural number; ſuch as proper names of men, women, places, creatures, and things; as alſo their virtues, vices, habits, and abſtract qualities, the generality of grains, ſpices, herbs, drugs and liquids, as, *wheat*, *rye*, *pepper*, *ginger*, *graſs*, *air*, *blood*, *milk*, &c.

To the Engliſh language there belong three genders, which in conformity to the cuſtom uſed in the Greek and Latin tongues, may be called *maſculine*, *feminine* and *neuter*; the *maſculine* comprehending all males, *feminine*, all females, and the *neuter* all things without life; and theſe are thus diſtinguiſhed by their terms, *he his* or *him*, for the *maſculine*; *ſhe*, *her*, *hers* &c for the *feminine*; and *it* for the *neuter*, but the quality remains the ſame, and is as applicable to males, as females, or things without life called *neuters*, as *a good boy*, *a good girl*, *a good knife*, &c.

Some *feminines* are formed by changing the termination of the *maſculine* into *eſs*, as *count*, *counteſs*; *duke*, *ducheſs*; *heir*, *heireſs*; *lion*, *lioneſs*, &c

The Engliſh language has three perſons, *viz.* *I*, the firſt; *thou*, the ſecond; *he*, *ſhe*, *it*, the third, in the ſingular number; and *we*, *ye*, *you*, *thoſe*, in the plural; to which may be added *who*, *whom* or *what*. Theſe diſtinctions are abſolutely neceſſary, as appears from the nature of ſpeech, which is always employed about the perſon or perſons, then immediately ſpeaking, denoted by the characteriſtic *I* or *we*; the perſon or thing ſpoken to by *thou*, *ye* or *you*; or the perſon or thing ſpoken of, by *he*, *ſhe*, *it*, *they*, &c. This is to be underſtood when they ſtand before an affirmation, as *I write*, *thou writeſt*, *he writeth*, but in compound ſentences, and after affirmations, they are changed into *me*, *thee*, *him*, &c. as, *I can prove this horſe belongs to me*, *thee*, &c.

All qualities in Engliſh are the ſame in both numbers, as *a good man*, *ten good men*, &c. and unleſs ſome name be joined with it, to determine what quality it is to be underſtood of, it can never make the ſenſe complete; as *good*, *bad*, &c. have no meaning 'till applied; as *a good boy*, *a bad horſe*, &c.

When two names are compounded into one word the firſt becomes a quality, as, *ſea fiſh*, *gold cup*, &c

My, Thy, Her, Our, Your, Their, are called *perſonal poſſeſſives*, and are only uſed when they are joined with names, as, This is my horſe, My coat, My book, &c. but when the ſenſe is not expreſſed immediately, but underſtood, or a queſtion is aſked, they are changed into Mine, Thine, Hers, Yours, Theirs; as, This knife is mine; that is, This is my knife; Whoſe knife is this? Mine, or, it is my knife, &c.

To qualities belong alſo increaſe or diminution of the value, goodneſs or virtue of the names to which they are joined; and theſe are generally formed by adding *er* and *eſt* to the plain ſimple word itſelf; as Fair, Fairer, Faireſt; though ſometimes they are made by adding More or Moſt to the ſimple word, as Fairer or More fair, Fairer or Moſt fair: reading and obſervation will quickly teach any perſon where to introduce thoſe in the moſt advantageous place. Theſe four following are irregulars; Good, Better, Beſt; Bad or Ill, Worſe, Worſt; Little, Leſs, Leaſt: Much, More, Moſt.

Inſtead of the various terminations and declenſions, of the other languages, the Engliſh uſe *a* or *the*, *of*, *to* *by*, *from* or *with*, &c to diſtinguiſh the ſeveral circumſtances of the Name both when it is alone, and alſo when it is joined with the Quality in both numbers: as,

Singular number.	Plural number.
A or *the man*	*The men*
Of a or *the man*	*Of the men*
To a or *the man*	*To the men*
By from or *with a* or *theman*	*By, from* or *with the men*

Singular.	Plural.
A or *the good horſe*, &c.	*The good horſes*, &c.
Of a or *the good horſe*, &c.	*Of the good horſes*, &c.

We have already taken notice that the third claſs of words, is the affirmation and what its office is; we ſhall only here obſerve, that it has *two numbers*, *time* and *perſon* belonging to it, by which the being, action or paſſion of the ſubject or name is declared or affirmed; for the expreſſing the true ſtate of the time, there is what are uſually called *auxiliaries*, from or by which the times

of other affirmations are expreſſed, there being only the *preſent* and the *paſſing time* naturally ariſing from the different endings of the words themſelves; that is, the preſent and the paſſing, or paſt time, as *love* the preſent, and *lov'd* or *loved* the paſſing time. The preſent time, or the inſtant in which any thing is actually performing, &c. is diſtinguiſhed by the words *do*, *doeſt*, or *doth*, for the ſingular number; and *do* only for the plural, with the proper perſonal ſigns, *I*, *thou*, *he*, *we*, *ye*, *they*, &c. The paſſing time is an imperfect manner of expreſſing, and intimates ſo much, having the ſign *did*, or the termination *ed*: the paſt time ſhews the action compleat, by affirming ſomething with the ſign *have*; there is alſo what is called the *preterpluperfect tenſe*, and has the ſign *had* affixed to it, the other is the *future tenſe*, that affirms ſomething *ſhall* or *will* be hereafter. And tho' there are really but three proper diſtinctions of time, *viz.* the preſent, the paſt, and the future, yet as our language, as well as others, hath various, terminations, or manners of expreſſion, we ſhall inſert them: as to the diſtinctions of what is commonly called *moods*, it is undeniably certain that they may be denoted as variouſly, and be as numerous as the particular circumſtances require.

As what is called the *potential* and *ſubjunctive moods*, are an undeniable proof of differing only by ſome accidental ſigns; for which reaſon they are not here enumerated, but called the *1ſt*, *2d*, *3d*, and *4th* mood. The firſt declaring or making ſome poſitive aſſertion about, or relating to the ſubject, or name. The ſecond having only one tenſe and five perſons, and is employed wholly about commanding or ordaining, praying or permitting ſomething to be done without any ſpecification of time. The third may be variouſly circumſtanced, according as it has its expletives adjoining. And the fourth expreſſes the action barely and indefinitely as to time. The two auxiliaries ſupply all others, with thoſe tenſes or times which they naturally have no proper termination or diſtinction for, *viz.* *to have*, by whoſe aſſiſtance all actives are formed, or ſuch as import doing ſomething; and *to be*, from which all paſſives are formed, that is ſuch as import ſuffering or bearing ſomething done to the ſubject.

The *firſt* or *indicative* mood.

Preſent tenſe. Singular.	Preſent tenſe. Plural.
I——*have*	*We*——*have*
Thou——*haſt*	*Ye*——*have*
He——*hath*	*They*——*have*

Paſt tenſe. Singular.	Paſt tenſe. Plural.
I——*had*	*We*——*had*
Thou——*hadſt*	*Ye*——*had*
He——*had*	*They*——*had*

Future tenſe. Singular.	Future tenſe. Plural.
I ſhall or *will have*	*We* }
Thou ſhalt or *wilt have*	*Ye* } *ſhall* or *will have*
He ſhall or *will have*	*They* }

Some make other diſtinctions of time, but as they are only a coupling of thoſe together, this ſhort eſſay will not permit the diſquiſition; ſuch as *I have had, I had had.*

The *ſecond* or *imperative* mood.

Have thou. Let him, her, it have. Let us have. Have ye. Let them have.

The *third* or *ſubjunctive, potential*, &c. mood

Is always diſtinguiſhed by adding ſome ſign of wiſhing, power, &c. as *I may* or *can have*; *I might, could, ſhould*, or *ought to have*, &c.

The *fourth* or *infinitive* mood.

Is always diſtinguiſhed by the ſign *to*; as *to have, to love, &c.* from this mood that quality called a *participle*, is formed, importing poſſeſſion; as *having, being loving*, &c.

The *firſt* or *indicative*, mood.

Preſent tenſe. Singular.	Preſent tenſe Plural.	Paſt tenſe. Singular.	Paſt tenſe. Plural.
I am	*We are*	*I was*	*We were*
Thou art	*Ye are*	*Thou waſt*	*Ye were*
He, ſhe, it is	*They are*	*He was*	*They were*

Future tenſe. Singular.	Future tenſe. Plural.
I ſhall or *will be.*	*We* } *ſhall* or *will be.*
Thou ſhalt or *wilt be.*	*Ye* }
He ſhall or *will be.*	*They* }

There are other expreſſions, called tenſes, compounded of *have* and this verb; as, *I have been*, &c. *I had been*, &c.

The *ſecond* or *imperative* mood.

Be thou. Let him, her, it be. Let us be. Be ye. Let him be.

The *third* or *ſubjunctive*, &c. mood.

That I may, can, might, would, could, ſhould or *ought to be*, &c.

The *fourth* or *infinitve* mood.

To be, to have been. Being.

From theſe all other affirmations regular and irregular are formed and completed, to expreſs every poſſible circumſtance of time, action or paſſion: as for example.

First Mood.

I love, I have loved, I had loved, I ſhall or *will love,*

We	*We*	*We*	*We*
Thou loveſt or *doſt love*		*Thou lovedſt* or *didſt love*	
Ye love or *do love*		*Ye loved* or *did love*	
Thou haſt loved		*Thou hadſt loved*	
Ye have loved		*Ye had loved*	

Thou ſhalt or *wilt love*
They ſhall or *will love*

Second Mood.

Love thou; love he, ſhe, or *it,* or *let him,* or *it love: love we,* or *let us love; love ye, love they,* or *let them love.*

Third Mood.

I, thou, he, ſhe, &c. *may, can, might, could,* &c. *love.*

Fourth Mood.

To love, loving, &c.

From what has been ſaid, it is obſervable, that the natural formations are made ſucceſſively thus: firſt, *ſomething is affirmed by the firſt perſon ſingular*; *as I* love,

then, loved, or did love, then I have or had loved; and afterwards ſhall or will love. But there are ſome verbs that are irregular, and inſtead of ending in *ed*, in the 2*d* and 3*d* tenſes have particular endings of their own; as I bear, bore, have born; I beat, have beaten; I begin, have begun; I behold, have beheld; I bend, have bent; I bind, have bound; I bite, have bitten; I blow, blew, have blown; I bleed, have bled; I breed, have bred; I bring, have brought; I break, broke, have broken; I am born, was born, have been born; I buy, have bought; I catch, have caught; I chide, chid, have chidden; I chuſe, choſe, have choſen; I come, came, am come; I cleave, clove, have cloven; I cut, have cut; I creep, crope, or crept, have crept; I crow, crew; I dare, durſt; I deal, dealt; I do, did, have done; I drew, have drawn; I dream, dreamt; I drink, drank, have drunk; I drive, drove, have driven; I do eat, did eat, have eaten; I fall, fell, am fallen; I feed, fed; I feel, felt; I do fetch, did fetch; I fight, have fought; I find, found; I fling, flung; I fly, flew, am flown; I fly, fled, am fled; I forget, forgot, have forgotten; I get, got; I gave, have given; I go, went, am gone; I grind, ground; I grew, grow, am grown; I hang, hung, have hanged; I hear, heard; I hide, hid, have hidden; I hold, held; I keep, kept; I know, knew, have known; I lead, led; I learn, learnt; I leave, left; lend, lent; I do let, did let, have let; I lie, have lain; I lie, lied; I loſe, loſt; I make, made; I mean, meant; I meet, met; I miſs, miſt or miſſed; I owe, have owed; I do, did, have put; I do, did, have read; I ride, rid, have ridden; I ring, rung; I riſe, roſe, am riſen; I do, did, have run; I ſay, ſaid; I ſee, ſaw, have ſeen; I ſeek, ſought; I ſell, ſold; I ſend, ſent; I do, did, have ſhed; I ſhine, ſhone; I ſhoe, ſhod; I ſhoot, ſhot; I ſhrink, ſhrunk; I ſing, ſang, or ſung; I ſit, ſat or ſate; I ſlay, ſlew, have ſlain; I ſleep, ſlept; I ſlide, ſlid; I ſling, ſlung; I ſmell, ſmelt; I ſmite, ſmote, have ſmitten; I ſpeak, ſpoke, have ſpoken; I ſpend, ſpent; I ſpill, ſpilled or ſpilt; I ſpin, ſpun; I ſpit have ſpit, or ſpitten; I do, did, or have ſpread; I ſpring, or ſprung; I ſpit, or ſpat; I ſow, ſowed, have ſown; I ſtand, ſtood; I ſtink, ſtunk; I ſtrike, ſtruck, have ſtriken; I ſtring,

ſtrung; I ſwear, ſwore, have ſworn; I do or did ſweat, have ſweated; I ſweep, ſwept; I ſwim, ſwam, have ſwum; I take, took, have taken; I teach, taught; I tear, tore, have torn; I tell, told; I think, thought; I thrive, throve, have thriven; I throw, threw, have thrown; I tread, trod, have trodden; I underſtand, underſtood; I weave, wove, have weaved; I weep, wept; I win, won; I am, was, have been willing; I work, wrought; I wring, wrung; I write, wrote, have written.

The fourth part is univerſally here called *particles*, under which denomination, all thoſe ſmall words that tie or unite the others together, or that expreſs the modes or manners of words are ſignified; and which uſually, by the common grammarians, are called *adverbs*, *conjunctions*, *prepoſitions*, and *interjections*. From the due uſe and connexion of theſe four parts, are formed ſentences; and from a number or multitude of ſentences, ariſe regular diſcourſes, ſpeeches, *&c.* A ſentence conſiſts of three words at leaſt, by which ſome idea of the mind is expreſſed; as *lying is hateful*. And this is called a ſimple ſentence, wherein the name or thing is expreſſed but once, and ſomething is affirmed of that ſubject: firſt, its being, and next its mode of being, or elſe ſome action of the ſubject paſſes upon another, or at leaſt is underſtood ſo to do. All others are compounded, wherein either the ſame ſubject or name is repeated, or different ones affirmed ſomething of, *&c.* The name ordinarily is placed before the affirmation and is always really expreſſed or underſtood ſo to be; as, *John loves Mary*. And here it muſt always be obſerved, that the ſame number and perſon, that the name whoſe action or paſſion is intended or expreſſed by the affirmation itſelf be; as in the example above, the name *John*, is the third perſon ſingular, and ſo is the affirmation *loves*; and in the following ſentence, *men love your wives*: the name *men* is the ſecond perſon plural ſo is the affirmation. *We admire learning*: here *we* is the firſt perſon plural and *admire*, is ſo alſo: which is to be obſerved of all others.

DIRECTIONS FOR WRITING.

I Shall endeavour to make this performance uſeful to thoſe who deſire to write well for common buſineſs, as alſo to ſuch teachers who want to be inſtructed in the firſt principles of the art of writing. And therefore *I* ſhall not trouble you with a long, unneceſſary account of the dependance of all the letters in the ſeveral alphabets upon one another, that being eaſily diſcovered (ſo far as is material) by any one who knows but the fundamental letters of each hand, which I ſhall only mention, and leave the reſt to your own obſervation.

The ſeveral ſorts of hands now in uſe among us, may be divided into two branches, viz. thoſe of abſolute uſe for buſineſs, and thoſe which are only ornamental. Thoſe of abſolute uſe may be reckoned ſix, the round, and Italian, in which moſt of the common affairs of trade, and the ordinary buſineſs of life, are written by all Europeans; the engroſſing, ſquare text, court, and chancery hands, in which all the various buſineſs of the law is generally tranſacted, and recorded. The other hands, viz. the old Engliſh, the Roman, and Italian prints, the German text, &c. are only made uſe of by way of ornament, or curioſity in ſome particular caſes, and therefore the writing of them is not eſteemed of ſuch neceſſity to thoſe who are intended for common buſineſs.

The principal things to be aimed at in order to write any hand well, are thoſe two; firſt, To get an exact no-

tion or idea of a good letter, which may be done by a frequent and nice obſervation of a correct copy; the other is, To get ſuch a command of hand, as to be able to expreſs, with the pen, that idea upon the paper, which is attained by conſtant and careful practice after good examples; the learner being firſt informed of the moſt neceſſary things to be obſerved in the practice of that hand he intends to be maſter of. I ſhall therefore,

I. Mention ſome things to be generally obſerved in writing.

II. Give ſome directions for holding the pen.

III. Shew the nature of the pen, with particular rules and proportions for writing each hand.

And, fourth, Lay done ſome proper directions for young perſons, when they firſt enter upon buſineſs, in order to bring them to write a good hand with expedition, and to make them place figures after the moſt beautiful and practical manner.

I. The eſſential properties of a good piece of writing are, a due proportion of the characters throughout the whole; a juſt diſtance between the letters themſelves as well as the words; with a natural leaning or inclination of the letters one to another: a clean, ſmooth ſtroke performed with a maſterly boldneſs and freedom, without which, the moſt regular piece is like a dead corps, whoſe features, tho' they may be exact in ſymmetry, yet want that ſpirit which only can render it an object both valuable and delightful.

The proportion of the ſeveral letters in moſt hands, is generally regulated by the *o* and *n*, therefore let the making of them be firſt carefully practiſed, and then the other letters which come from them, all which muſt be of the ſame width and fulneſs of ſtrokes as they are of.

The proportion and ſhape of the letters in any hand, ought to be the ſame, whether they are written in a large or ſmall ſize; therefore, let every hand be firſt learned in a large character, which will not only ſooner fix the idea of a good letter in your mind, but alſo give you a greater freedom, and in a ſhorter time, than writing to the ſmall will. It is certain, that the leſſer is always

Round Hand

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLM

NOPQRSTUVWXYZ

He that loveth pleasure shall be a poor man, he that loveth wine and oyl shall not be rich.

German Text

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMN

OPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz.

ABCDEFGHIJKLM

NOPQRSTUVWXYZ

Speak not in the ears of a fool for he will despise

Italian Hand

abcdefghijklmnopqrstuvwxyz

A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

Riches are not forever & doth the
crown endure to every generation?

Engrosing

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMN

OPQRSTUVWXYZ

Running Hand

Fret not thy self because of evil men,
neither be thou envious
Forsake the foolish and live and go in
the way of understanding

contained in the greater; and he that attains to write any hand large, may ſoon write it as ſmall as he pleaſes.

Let all ſtrokes, which are the conſtituent parts of a letter; or (as ſome call them) the body-ſtrokes, be made with the full pen, and of the ſame thickneſs one with another as near as is conſiſtent with the nature of the hand you are writing.

Let all the ſtrokes which join the conſtituent parts of letters, or the letters themſelves together, be made with the corner of the pen, and as fine as the hand will admit of; which ſtrokes muſt always have ſome proportion to the body-ſtrokes, and muſt be thicker, or thinner, according as the character is leſſer, or greater; turn not your pen, neither alter the poſition of your hand, but let it move with a ſteady, eaſy motion, and perform every letter without catchings, and convulſive flutterings.

Let the fine ſtrokes anſwer one another, in a kind of oppoſition, and in many hands run parallel.

Let all the letters which have not ſtems above or below the line, be even at top and bottom. Let thoſe which have ſtems above the other leteres be equal in length to *l*, except *t*, and a few other letters in ſome hands. Let thoſe which have ſtems below the line, be equal in length to the *j*. ſome few excepted, which may be ſeen by the alphabets of the ſeveral hands in the examples.

Let the capital letters be equal in height to the little *l*, and a ſmall matter ſtronger.

Let the diſtance between words be double to that between letters.

Let the lines be of ſuch a diſtance that the ſtems of the letters may not interfere one with another; to prevent which they muſt be at leaſt twice the length of an *l* aſunder.

II. The next thing is, directions for holding the pen, and ſitting to write.

Hold your pen between the two fore fingers, extended almoſt ſtraight, and the thumb, bending a little outward, and in your right hand, with the hollow ſide of the pen downwards, and the nib flat upon the paper; let it reſt between the two upper joints of the fore-finger, and upon the end of the middle one, about an inch from

the nib of the pen, the ends of the little finger, and that which is next to it, bend in towards the palm of the hand, about half an inch diſtant from the end of the middle finger.

Let the book or paper lie directly before you, and your hand reſt only on the tip of your little finger; let no other part of your hand or wriſt touch the paper or desk; reſt your arm very lightly between the wriſt and elbow. Keep your body upright, and from touching the desk; let your elbow be almoſt cloſe to your ſide, and the pen pointed towards the outer part of your left ſhoulder; ſo that a line being drawn from the inner part of the arm, at the bend of the elbow to the nib of the pen, will be nearly at right angles with the line you are writing upon. And for the ſlope hands, turn your left ſide a little towards the desk; but the upright ones, let the body be directly before it, and the right elbow turned outwards from your ſide: ſo that a right line being drawn from the inner bend of the elbow to the nib of the pen, will make an angle, near 45 degrees, with the line you are writing upon. Let the weight of your body reſt upon your left arm, and the paper be kept down with your left hand.

Take care of preſſing hard upon your pen in writing any hand.

III. As to the nature of the pen, and the particular rules and proportions for writing each hand, though they might be ſwelled up to a very great number, by enlarging upon every critical nicety, yet I ſhall deliver only ſuch, as, in my judgment, are moſt neceſſary, moſt beautiful, and moſt applicable to expeditious practice.

Make the nib of your pen for the round and round text hands the breadth of the full ſtroke; and that part lying next the hand ſomewhat ſhorter and narrower.

For the Italian hand make the nib ſomewhat finer, and the ſlit longer.

Note, in writing, where figures are intermixed, they muſt always ſlope.

Your figures likeways muſt be larger than your writing.

When your figures are ranged in columns make them upright.

To make a PEN.

TAKE the firſt, ſecond, or third quills in the wing of a gooſe or raven (thoſe that are round, clip and clean are the beſt.) when you have ſcrap'd off the thin rind thereof, with the back edge of your pen-knife, hold it in your left hand with the feather end from you, then enter the back thereof ſloping, and cut off as much in length, as the quill is in breadth, and anſwer that with another cut on the inſide, like an oppoſite to the former; then turn the quill, and enter the edge of your pen knife even in the back thereof, and exactly in the midſt of the half round. neither inclining the blade one way or other, that the ſlit may not be made awry. Then put in the peg of your knife haft, if it has one for that purpoſe, or the end of a whole quill, and with a ſudden twitch, force up the ſlit, holding your left hand thumb hard upon the back of the quill, to put a ſtop how far the ſlit ſhall go. This being done, enter your knife ſloping in the other ſide above the ſlit, about twice the breadth of the quill, and cut away the cradle-piece; then turn the back upwards, and cut down to the end of the ſlit, the cheek or ſhoulder-piece; and in ſo doing turn the knife on both ſides towards the back. After this, place the inſide of the end or nib of the pen, upon the nail of your left hand thumb, holding the quill faſt between the fore-finger and middle finger of that hand. Laſtly, to finiſh the nib, enter the edge of the knife on the back, and near the end thereof ſloping, and immediately turning the edge almoſt downright, cut it off.

There are four conſiderations belonging to the quill.

If the quill be too hard, ſteep it a while in water.

If it be too ſoft, harden it with embers.

If it be too thick, pare a ſmall quantity from the back of the nib.

If it be too thin and weak, ſtrengthen the pen with a ſhort ſlit, a ſhort nib, and broad ſhoulder.

Beſt BLACK INK.

TO ſix quarts of rain or river water (but rain water is the beſt) put one pound and a half of freſh blue galls of Aleppo (for thoſe of Smyrna are not ſtrong enough) bruiſed pretty ſmall, eight ounces of copperas, clean, rocky and green, eight ounces of roch allum: let theſe ſtand together in a large ſtone bottle, or clean ſtone pot, or earthen pot, with a narrow mouth to keep it free from duſt, ſhake, rowl, and ſtir it well once every day, and you will have fine ink in about a month's time, and the older it grows, the better it will be for uſe.

Ingredients for a Quart.

One quart of water, four ounces of galls, two ounces of copperas, and two ounces of gum, mixed and ſtirred as above.

LONDON INK POWDER.

TAKE ten ounces of the cleareſt nut-galls, bruiſe them, and ſift the powder very fine, then add white copperas two ounces, Roman vitriol three ounces, gum arabick or ſandarack an ounce, bruiſe and ſift them very fine, ſo that tho' they appear white, a little being put into water, will in a little time turn it, and an ounce of powder will make a pint of very black ink.

JAPAN or SHINING INK.

TAKE gum arabick and Roman vitriol, of each an ounce, galls well bruiſed a pound, put them into rape vinegar, or vinegar made of clear ſmall beer; let them remain in a warm place, often ſtirring, till the liquor becomes black, then add to a gallon, an ounce of ivory black and a quarter of a pint of ſeed lac varniſh, and it will be a curious black ſhining ink.

A Powder Ink to rub on paper, and write on.

BRUISE about twenty nut galls, and half an ounce of Roman vitriol, as much gum arabick and gum ſandarack, mingle theſe finely together, when well bruiſed and ſifted to powder, rub the paper hard with it with cotton wool, and poliſhing it with a piece of ivory, write with water, and in a little time the letters you write will appear a fair black, as if written with the beſt ink.

To make RED INK.

TAKE three pints of ſtale beer (rather than vinegar) and four ounces of ground Brazil wood, ſimmer them together for an hour, then put in four ounces of roch allum, and theſe three are to ſimmer together for half an hour, and then ſtrain it through a flannel, and bottle it up, well ſtopped for uſe.

To keep INK from freezing or moulding.

IN hard froſty weather, ink will be apt to freeze; which, if once it doth, it will be good for nothing; for it takes away all its blackneſs and beauty: to prevent which, if you have not the conveniency of keeping it warm, or from the cold, put a few drops of brandy, or other ſpirits, into it, and it will not freeze. And to hinder its moulding, put a little ſalt therein.

COPIES for WRITING.

Single COPIES in proſe, in an alphabetical order.

A

A Wiſe man's anger is of ſhort continuance
Accuſtom your children to a true notion of things
Adverſity is the touchſtone of friendſhip
Approve not of that man who commends all you ſay
A flattering companion is a dangerous enemy

A wiſe man governs with eaſe, and is obey'd with plea-
ſure
A coveteous man is always in want
Add to your faith, virtue, and to virtue, knowledge
A prudent man values content more than riches
A virtuous mind is rather to be choſen than promotion
Authority is the main point in government
Abſtain from all appearance of evil
A merry heart maketh a chearful countenance
Anger reſteth in the boſom of fools
A ſoft anſwer turneth away wrath
Adverſity makes a man wiſe, rather than riches:
Advice comes too late when a thing is done.

B

BE more afraid of ſecret ſins, than open ſhame
Brave ſpirits promote the public good
Be patient in adverſity, and humble in proſperity
Beauty without virtue is like a painted ſepulchre
Be leſs confident and more diligent
By learning to obey, you ſhall know how to command
Brave men will do nothing unbecoming themſelves
By diligence and induſtry we come to preferment
Buy thou the truth, and ſell it not.

C

CONTENTMENT makes a man happy without a
fortune
Children require inſtruction as well as proviſion
Commit not that to another, that you can do yourſelf
Cuſtom in infancy, becomes nature in old age
Chide him not too much, who confeſſes his fault
Courteſy and humility are marks of gentility
Confeſſion of a fault makes half amends for it
Contentment is preferable to riches and honour
Conſider the ſhortneſs of life, and certainty of death
Competency with content is a great happineſs.

D

DEATH deſtroys not the ſoul, but an ill life does
Delight in what you undertake to learn
Drinking is the drowning of cares, not the cure of them

Do unto others as you would have them do unto you
Death will comfortably end a well ſpent life
Deviſe not evil againſt thy neighbour
Do not render evil for evil unto man
Drunkenneſs reveals what ſoberneſs conceals
Do not govern your life by fancy, but by reaſon.
Delay in many caſes is dangerous

E

EVERY delay of repentance is a cheat upon ourſelves
Education is that which maketh the man
Every prudent man dealeth with knowledge
Exalt wiſdom, and ſhe ſhall promote thee
Eaſe and honour are ſeldom bed fellows
Evil company makes the good bad, and the bad worſe
Every idle thought to judgment muſt be brought

F

FORSAKE the fooliſh, and go in the way of underſtanding
Follow the dictates of reaſon, and you are ſafe
Forget not God in your mirth, nor yourſelf in your anger
Firſt learn to obey, before you intend to govern
Feed your body as your ſlave, not as your maſter
Fools make a mock at ſin
Few do good with what they have gotten ill
Future events muſt be left to providence
Frugality and induſtry are the hands of fortune.

G

GIVE God the firſt and laſt of each day's thought
Grieve not for thoſe things which are out of your power
Great ſins require great repentance
Good education is the foundation of a man's happineſs
Give as chearfully as you receive
God often corrects us in this life to ſave us in the next
God is our refuge, a very prudent help in trouble
Good manners, grace and truth are ornaments in youth.
Greater profit doth always come of learning than of play.

Good men are ſafe when wicked men are at odds

H

HE that will not work ſhould not eat
Happineſs is deſired by all, but obtained by few
He is in ſome-degree wiſe that conceals his ignorance
He that begins well has done half his work
Hear both parties before you give judgment
He that boaſts in his ſins glories in his ſhame
He never wants comfort that has content
Hear, ye children, the inſtruction of a father
Hear inſtruction; be wiſe, and refuſe it not
He that ſins againſt conſcience ſins with a witneſs
He that ſwims in ſin muſt ſink in ſorrow.

I

IF riches encreaſe, ſet not your heart upon them
In proſperity prepare for adverſity
Idleneſs has no advocate, but many friends
It requires as much care to keep as to get an eſtate
Induſtry keeps the mind clear and the body healthy
In the multitude of counſellors there is ſafety
Induſtry is fortune's right hand, and frugality her left
Inſtruction and a good education is a durable portion
It is good to have a friend but bad to need him.

K

KEEP back thy ſervant from preſumptuous ſins
Knowledge is the treaſure of the mind
Know when to ſpeak and when to hold your tongue
Keep company with thoſe who may make you better
Keep thy tongue a priſoner, that thy body may go free
Knowledge puffs up ſome men and humbles others
Keep thy tongue from evil and thy lips from guile
Keep good company, and you ſhall be of that number
Keep a cloſe mouth, if you would have a wiſe head
Keep at a diſtance from ill company
Kings may win crowns, but cannot conquer death

L

LEARNING is the ornament of youth, and comfort of age

Lament not the loſs of that which ye cannot retrieve
Lying lips are an abomination to the Lord
Let another man praiſe thee, and not thy own mouth
Love not ſleep, leſt thou come to poverty
Life without a friend, is death with a witneſs
Learn to live as you would wiſh to die
Liberty is grateful to all but deſtructive to many
Let not the work of the day be put off till to-morrow

M

MERCY and truth ſhall follow them who deviſe good
Man has much to learn, but a ſhort while to live
Malice ſeldom wants a mark to ſhoot at
Make proviſion for want in time of plenty
My ſon, if ſinners entice thee, conſent thou not
My ſon, gather inſtruction from thy youth up
Many know good, but do not the good they know
Many live beggars all their life that they may not die ſo
Many are led by the ears more than by the underſtanding
Many are made ſaints on earth, that never reach heaven
Mend your manners, and that will mend your fortune

N

NECESSITY is commonly the mother of invention
No torments are ſo great, but patience may vanquiſh
Nothing is more contagious than an ill example
Not to grow better is commonly to grow worſe
No man hath ſeen God at any time
None ſhould covet what cannot poſſibly be had
Nothing is conſtant in this uncertain world
Nothing is ſo hard but diligence may overcome
Nature ſeldom changes with the climate

O

OUR life here is but a journey to the next world
Of all prodigality, that of time is worſt
One vice is more expenſive than ten virtues
One fault cannot juſtify the commiſſion of another
One bad companion may ruin many good men

Of all poverty, that of the mind is moſt deplorable
Of all things death ſhould never be forgot
Only by pride cometh contention
Once well done is twice done
On preſent time depends our future ſtate
Other people's deaths ſhould be momento's to our own

P

PROVIDENCE conſults our wants, not wantonneſs
Proſperity gains friends, and adverſity tries them
Paſſion is a bad counſellor and as ill a ſpeaker
Pride, like a wild horſe, overthrows his rider
Purſue uſeful and profitable ſtudies
Poverty and ſhame attend thoſe that refuſe inſtruction
Provide againſt the worſt and hope for the beſt
Poor men want many things, but covetous men all
Put not off the main buſineſs of life to the very article of death
Poor freedom is better than rich ſlavery.

Q

QUENCH not the ſpirit, pray without ceaſing
Quick at meat quick at work
Quench not your deſires when they tend to good
Quick promiſers are ſlow performers
Quietneſs and content are mates moſt excellent
Quiet men have quiet minds, and enjoy content
Quarrelſome perſons ſometimes meet with their match.

R

REPENTANCE is the phyſic of the ſoul
Remember not the ſins of my youth
Religion is beſt underſtood when moſt practiſed
Revenge not injuries, but forgive them
Reality is now become a great rarity
Riches profit not in the time of wrath
Remember thy Creator in the days of thy youth
Remember your duty to God, your neighbour, and yourſelf
Repent to day, to-morrow may be too late.

S

SHAME and diſgrace ſhall be the portion of fools
Sin goes before, and ſhame certainly follows after
Silence is an antidote againſt an envious tongue
Saying and doing ſhould be but one man's office
Shew me a liar, and I will ſhew you a thief
Sin and ſorrow are inſeparable companions
Soft words ſometimes work upon the proudeſt hearts

T

THERE are none ſo poor as thoſe whom God hate
The hope of reward ſweetens labour
To praiſe yourſelf is the way to be diſpraiſed
The power of example prevails more than precept
Truth is aſhamed of nothing but to be hid
The worth of a thing is beſt known by the want of it
Thoſe who wo'nt mend to day, ſhall have more work to-morrow
The doing nothing is very near doing evil
To do good is the way to find it
Time and tide will for no man ſtay

U

USE ſoft words and hard arguments
Unlawful love ends generally in bitterneſs
Unto the upright there riſes light in darkneſs
Undertake deliberately, and execute vigorouſly
Unſanctified proſperity is the bane of virtue
Unto thee will I cry, O Lord, be not ſilent to me
Unwillingly go to law, and willingly make an end.

V

VIRTUE is commended of all but followed by few
Value not yourſelf by another man's opinion
Virtue often ſuffers, when vice goes unpuniſhed
Valour can do little without diſcretion
Virtue to nobleſt acts the mind inclines
Variety is the beauty of the world
Virtue is firſt to be ſought and money next

W

WISE men keep their expences short of their income
Whatever is forbidden in act is also in thought
Wicked practices discover bad principles
Would you be wise endeavour to be good
Wisdom to the mind is like health to the body
We must not blame fortune for our own faults
Would you be rich, be industrious; if wise, be studious
Where there is no fault, there needs no pardon
When passion rides then give reason the reins

X

XERXES wept at the thoughts that his vast army would be dead in 100 years
Xenophon accounted the wise man happy
Xenophon was a learned general
Xerxes whipt the sea, because it would not obey his command
Xerxes wept at the changeable state of man

Y

YOUNG men see that you honour the aged
Youth is full of disorder and age of infirmity
You may know men by the company they keep
Young men go to death but death goes to old men
Young men in strength should provide against age and weakness
Your vice, and not your poverty, is your shame
You must crack the shell before you can have the kernel
Yield quietly to what must come unavoidably.

Z

ZEALOUSLY strive for an eternal crown
Zeal grounded on knowledge enlivens devotion
Zeal for religion cannot warrant revenge
Zeal in a good cause commands applause
Zeal without knowledge is but religious wild-fire
Zeal if not rightly directed is very pernicious.

As you expect that men ſhould deal by you,
So deal by them, and give each man his due,
Better it is to gain great reputation
Than heap up wealth with trouble and vexation.
Conſtraint in all things makes the pleaſure leſs:
Sweet is the love that comes with willingneſs.
Deſpair of nothing that you would attain:
Unweary'd diligence your point will gain.
Experience beſt is gain'd without much coſt;
Read men and books; then practiſe what thou know'ſt.
Fortune may ſometimes prove true virtue's foe,
But cannot work her utter overthrow.
Greatneſs in virtue only's underſtood:
None's truly great, that is not truly good.
Honour's a god that none but fools adore:
The wiſe have nobler happineſs in ſtore.
If all mankind would live in mutual love,
This would would much reſemble that above.
Kingdoms, like private perſons, have their fate,
Sometimes in high, ſometimes in low eſtate.
Let each man follow cloſe his proper trade,
And all affairs will ſoon be better made.
Men's fancies vary ſtrangely, like their faces,
What one commends, another man diſgraces.
Number itſelf is at a loſs to gueſs
Th' endurance of our future happineſs.
Oh! that the ſons of men would once be wiſe,
And learn eternal happineſs to prize!
Pray thou to God, that he may be inclin'd
To grant thee health of body and of mind.
Quarrelſome brawling, gaming, ſuddling, ſhun:
Thrice happy they, that ne'er ſuch courſes run.
Remember, time will come, when we muſt give
Account to God, how we on earth do live.
Some men get riches, yet are always poor;
Some get no riches, yet have all things ſtore.
They that are proud, and other men diſdain,
Do often meet with ſcorn and hate again.
Virtue is prais'd but little practis'd by us:
So looſe the age that few are truly pious.
What's humain life? a day, a race, a ſpan,
A point, a bubble, froth: ſo vain is man.

Xenophilus did well in health abide
One hundred ſeven years, and then he dy'd.
Young men, take pains, be brisk, and I'll engage,
Your youthful pains will pleaſure yield in age.
Zaleucus made his laws ſo ſtrict, that thoſe,
Who acted whoredom, both their eyes ſhould loſe.

Of the POINTS or STOPS, and other MARKS uſed in writing and reading; with their characters, places and ſignifications.

THE ſtops are uſed to ſhew what diſtance of time muſt be obſerved in reading: and they are ſo abſolutely neceſſary to the better underſtanding of what we write, and read, that without a ſtrict attention to them, all writing would be confuſed, and liable to many miſconſtructions.

Stops, conſidered as intervals in reading, are but four, viz. comma, ſemicolon, colon, and period, or full ſtop: and theſe bear a kind of muſical proportion of time one to another: for a comma ſtops the reader's voice, while he may privately, with deliberation, tell one; the ſemicolon, two; the colon, three; and the period, four.

Their characters are thus,

Comma (,) a circular daſh at the foot of a word.
Semicolon (;) a point over the comma.
Colon (:) two points.
Period (.) a ſingle point at the foot of a word.

But if a queſtion be asked, there's a circular ſtroke upon a ſhort line put over the period, and 'tis called an interrogation thus (?).

If a ſudden wondering be expreſſed, then a ſtraight line is placed over the period, and 'tis called a note of admiration, thus (!)

If one ſentence be incloſed within another, of which it is no part, then 'tis put between two large half circles

called parenthesis, thus (.); and, in reading, this doth something lower the tone of the voice, as a thing, that comes in by the bye, interrupting the male coherence of the period, and restraining it from being taken in so large a sense as it might otherwise bear. Each part of it is equal in time to a comma.

These that follow, are the most usual marks in writing.

Accent (') being placed over a vowel, denotes, that the tone, or stress of the voice in pronouncing, is upon that syllable.

Apostraphe (') a comma at the head of letters, denotes some letter, or letters, left out for quicker pronunciation, as I'll, for I will; wou'dst, for wouldest; sha'n't, for shall not; ne'er, for never.

Asterism (*) a star, guides to some remark in the margin, or at the foot of the page. Several of them set together signify, that there is something wanting defective, or immodest in that passage of the author.

Breve (˘) is a crooked mark over a vowel, and denotes that it is sounded quick or short.

Caret (^) is placed underneath the line, and denotes that some letter, word, or sentence is left out by mistake, and must be taken in exactly where it points.

Circumflex (^) is in the same shape as caret, but is always placed over some vowel of a word, to denote a long syllable.

Dieresis (¨) is two points placed over two vowels of a word, that would otherways make a diphthong, and parts them into two several syllables.

Hyphen (-) is a straight mark a-cross, which, being set at the end of the line, denotes that the syllables of a word are parted, and that the remainder of it is at the beginning of the next line.

Here note, that whenever a word is thus parted, the syllables must be carefully separated by the rules of spelling.

'Tis used also to join, or compound two words into one; as, Ale-house. Inn keeper.

Being placed over a vowel it is not then properly called a Hyphen, but a Dash, which in writing signifies the omission of m or n; as, Nothing is more comen-

dable the fair writing; for, Nothing is more commendable than fair writing.

Index (☞) the forefinger pointing, fignifies that paſſage to be very remarkable, againſt which it is placed.

Obelisk (†) is uſed as well as the aſterifm*, to refer the reader to the margin. In dictionaries it commonly denotes a word to be obſolete, or leſs in uſe.

Paragraph (¶) or diviſion, comprehends ſeveral ſentences under one head, or ſubject.

Parentheſis [ ] or brackets, include words or ſentences of the ſame value and ſignification with thoſe they are joined to, which may be uſed in their ſtead.

Quotation (“) or a double comma reverſe, at the beginning of a line, ſhews a paſſage quoted out of an author in is own words.

Section (§) or diviſion, is uſed in ſubdividing of a chapter, or book, into leſſer parts or portions.

ABBREVIATIONS.

ABbreviations are very neceſſary for diſpatch of buſineſs. For by them, we expeditiouſly expreſs, or ſet down a long word, ſhortening it, by making ſome initial letter, or letters, belonging to the word, to expreſs it; as in the Table following.

A. B. Artium baccalaureus, or batchelor of arts
Abp. archbiſhop
Acct. account
A. D. Anno Domini, or the year of our Lord
A. M. Anno mundi, or the year of the world
Admrs. adminiſtrators
A. M. Artium magiſter, or maſter of arts
Ana. of each a like quantity
Ap. apoſtle
Adml. admiral
Agt. againſt
Amot. amount
Aug. Auguſt
A. R. Anno regni, or in the year of the reign
B. A. batchelor of arts
B. D. batchelor of divinity
B. V. bleſſed virgin
Bart. baronet
Bp. biſhop

C. chapter
Cant. Canterbury
Cent. centum, or hundred
Chan chancellor
Chap. chapter
Capt captain
Cl. clericus, or clerk
Co. company
Col. Coloſſians, colonel
Comrs. commiſſioners
Con. Conſtance
Cr. creditor
C.C.C. corpus Chriſti college
C. S. cuſtos ſigilli, or the keeper of the ſeal
C. P S. cuſtos privitati ſigilli, or keeper of the privy ſeal
Dr. doctor
Do. ditto
D. denarii, or pence
Dec. or xber, or 10ber, December
Devon. Devonſhire
Decd. decea'ed
Doct. doctrine
D.D. doctor of divinity
E. g. exempli grati, or for example
Eſq; eſquire
Exon: Exeter
Feb. February
Gent. gentleman
Hund. hundred
i. e. id eſt, or, that is
I. H. S. Jeſus hominum ſalvator, or Jeſus Saviour of men
Inſt. inſtant
Jan. January
Jno. John
Knt. knight
L. libræ, or pounds
Lieut. lieutenant
L. L. D legum doctor, or doctor of laws
Mar. March
M. A maſter of arts
Maj. Majeſty
Monſ. monſieur
Mr. maſter
Mrs. miſtreſs
M. D. medicinæ doctor, or doctor of phyſick
M. S. memoriæ ſacrum, or ſacred to the memory; alſo manuſcript
N. note
N. B. nota bene, note, mark well, or obſerve
N. S. new ſtile
No. number
non. l. non. l. quit, or, it does not appear
Nov. or 9ber, November
Obj. objection
O. W. old word
O. S. old ſtile
Oct or 8ber, October
Oxon. Oxford
Pd. paid
P. per, or by
Per ct. per centum, or by the hundred
Parl. parliament
Philom. philomathes, or lover of learning
Philo-math. philo-mathematicus, or a lover of mathematics
P S. poſtſcript
Q. queſtion

q. d. quasi dicat, or as if he should say
q. l. quantum libet, or as much as you please
q. s. quantum sufficit, or a sufficient quantity
qr. quarter, or farthing
Rev reverend
Rob. Robert
Reg prof. regius professor
Rt. Hon. right honourable
S. A. secundum artem, or according to art
St. saint
Sect. section
Sept. or ber, September
Serj. serjeant
Serv. servant
Shop. Shropshire
Sr. sir
ss. semissis, or half a pound
S. S. T. P. sacro sanctæ theologiæ professor, or professor or doctor of divinity
The. Theophilus
Tho. Thomas
V. verse
Viz videlicet, or, to wit; or, that is to say
Will. or Wm. William
wp. worship
Xn christian
Xt. Christ
Xtopher Christopher
Ye. the
Yn then
Yo. you
Ym. them
Yt. that
Yr. your
z. zeal
&c. et cetera, or and the rest, or and such like

To write on paper GOLD LETTERS, called SHELL GOLD.

LAY a little leaf gold upon a fine earthen plate, and drop thereon a little clear virgin's honey, then work it up with your clean knife's hafe, until it is thick like unto a paste, which put into an oyster-shell, and do it close; when you are to write with it, put a little gum water on the side of the gold, and mix a little thinly for your pen.

How to write SECRET LETTERS.

WRite what you would have seen on one side of the paper with common ink, and on the other side with milk, that which you would have secret; and when

you would make the ſame legible, direct your friend to hold that ſide, which is written with ink to the fire, and the milky letters will ſhew bluiſh on the other ſide, and eaſy to be read.

Another Way.

YOU muſt write a letter that may carry good ſenſe to your friend, but let the lines be wide aſunder: then between theſe lines write your ſecret letter, with gall water only, wherein the galls have been infuſed but a little time; for if after you have written with it there be any ſenſible colour left upon the paper, you muſt throw away the water, and make new; this being dry, and of one colour with the paper, will give no cauſe of ſuſpicion; and the rather, becauſe the letter purporteth a ſufficient ſenſe already. Now for the diſcovery of it, you muſt diſſolve ſome copperas in fair water, and with a fine penſil, dipt in the copperas water, you muſt moiſten the interlining of your letter, and thereby you ſhall make is legible.

To write both Blue and Red Letters at once, with the ſame ink and pen, and upon the ſame paper.

PUT the quantity of a hazel nut of litmoſe blue to three ſpoonfuls of conduit water, wherein ſome gum arabic is diſſolved; and when it hath ſettled the ſpace of an hour, if you write therewith you ſhall have perfect blue letters: and if you dip a pencil in the juice of lemons, and wet ſome part of the paper therewith, and afterwards let your paper dry again, and then write upon the place where the juice of the lemon was laid, with your blue ink, the letters will ſuddenly become red, and in all the reſt of the paper, the letters will be blue.

A Poem in praise of the invention of Writing.

BLeſt be the man! his memory at leaſt,
Who found the art, thus to unfold his breaſt;
And taught ſucceeding times an eaſy way,
Theſe ſecret thoughts by letters to convey;
To baffle abſence and ſecure delight,
Which till that time was limited to ſight.
The parting farewel ſpoke and laſt adieu,
The leſſ'ning diſtance paſt, the loſs of view,
The friend was gone which ſome kind moments gave,
And abſence ſeparated like the grave.
When for a wife the youthful patriarch ſent,
The camels, jewels, and the ſteward went,
And wealthy equipage, though grave and ſlow,
But not a line that might the lover ſhow.
The ring and bracelets woo'd her hands and arms,
But had ſhe known of melting words the charms
That under ſecret ſeals in ambuſh lie,
To catch the ſoul when drawn into the eye,
The fair Aſſyrian had not took his guide,
Nor her ſoft heart in chains of pearl been ty'd.

LETTERS

On Compliment, Buſineſs, and ſeveral other important Occaſions

HEre preſent you with a collection of uſeful letters on ſuch ſubjects as may naturally occur to a young man, both before, and at his firſt ſetting out in the world; which, if read attentively, and copied carefully, will ſoon correct his orthography, amend his manner of writing, and ſerve him to form a tolerable ſtile.

LETTER II.

From a Father to his ſon, on his keeping bad company, bad hours, &c. in his apprenticeſhip.

Dear Son,

I Am very much concerned to hear, that you are of late fallen into bad company; that you keep bad hours, and give great uneaſineſs to your maſter, and break the rules of his family: that when he expoſtulates with you on this occaſion, you return pert and bold anſwers; and, inſtead of promiſing or endeavouring to amend, repeat the offence; and have entered into clubs and ſocieties of young fellows, who ſet at nought all good example, and make ſuch perſons as would do their duty the ſubjects of their ridicule, as perſons of narrow minds, and who want the courage to do as they do.

Let me, on this occaſion, expoſtulate with you, and ſet before you the evil of the way you are in.

In the firſt place: What can you mean by breaking the rules of a family you had bound yourſelf by contract to obſerve? Do you think it is honeſt to break thro' engagements into which you have ſo ſolemnly entered: and which are no leſs the rules of the corporation you are to be one day free of, than thoſe of a private family?——Seven years, ſeveral of which are elapſed, are not ſo long a term but that you may ſee it determined before you are over fit to be truſted with your own conduct; twenty-one or twenty two years of age is full early for a young man to be his own maſter whatever you may think: and you may ſurely ſtay till then, at leaſt, to chuſe your own hours, and your own company; and, I fear, as you go on, if you do not mend your ways, your diſcretion will not then do credit to your choice. Remember, you have no time you can call your own, during the continuance of your contract; and muſt you abuſe your maſter in a double ſenſe; rob him of his time, eſpecially if any of it be hours of buſineſs; rob him of his reſt; then break peace in his family, and give a bad example to others? and all for what?

why, to riot in the company of a ſet of perſons, who contemn, as they teach you to do, all order and diſcipline; who in all likelihood, will lead you into gaming, drinking, ſwearing, and even more dangerous vices, to the unhinging of your mind from your buſineſs, which muſt be your future ſupport.

Conſider, I exhort you, in time, to what theſe courſes may lead you. Conſider the affliction you will give to all you friends, by your continuance in them: Lay together the ſubſtance of the converſation that paſſes in a whole evening, with your frothy companions after you are come from them; and reflect what ſolid truth, what uſeful leſſon, worthy of being inculcated in your future life, that whole evening has afforded you; and conſider, whether it is worthy breaking thro' all rule and order for?——whether your preſent conduct is ſuch as you would allow in a ſervant of your own? whether you are ſo capable to purſue your buſineſs with that ardour and delight next morning, as if you had not drank, or kept bad hours, over night? if not whether your maſter has not a double loſs and damage from your miſ-ſpent evening? whether the taking of ſmall liberties, as you may think them, leads not on to greater? for, let me tell you, you will not find it in your power to ſtop when you will; and then whether any reſtraint at all will not in time be irkſome to you?

I have gone through the like ſervitude with pleaſure and credit. I found myſelf my own maſter full ſoon for my diſcretion; what you think of yourſelf I know not; but I wiſh you may do as well for your own intereſt, and reputation too, as I have done for mine: and I'll aſſure you, I ſhould not have thought it either creditable or honeſt to do as you do. I could have ſtood the laugh of an hundred ſuch vain companions as you chuſe, for being too narrow minded to break through all moral obligations to my maſter, in order to ſhew the bravery of a bad heart, and what an abandoned mind dared to perpetrate. A bad beginning ſeldom makes a good ending, and if you were aſſured that you could ſtop when you came for yourſelf, which is very improbable, how will you anſwer it to equity and good conſcience, that you will do ſo for your maſter? There is, let me tell you, more true bravery of

mind in forbearing to do an injury, than in giving offence.

You are now at an age when you ſhould ſtudy to improve, not divert, your faculties. You ſhould now lay in a fund of knowledge, that in time, when ripened by experience, may make you a worthy member of the commonwealth. Do you think you have nothing to learn, either as to your buſineſs, or as to forming of your mind? would it not be much better to chuſe the ſilent, the ſober converſation of books, than of ſuch companions as never read or think; an author never commits any but his beſt thoughts to paper; but what can you expect from the laughing noiſy company you keep, but frothy prate, indigeſted notions, and thoughts ſo unworthy of being remember'd, that it is the greateſt kindne's to forget them?

Let me intreat you then, my dear ſon, for your family's ſake, or for your own ſake, before it be too late; to reflect, as you ought, upon the courſe you are enter'd into. By applying yourſelf to books, inſtead of ſuch vain company, you will be qualified in time for the beſt of company, and to be reſpected by all ranks of men. This will keep you out of unneceſſary expences, will employ all your leiſure time, will exclude a world of temptations, and open and enlarge your notions of men and things, and, finally, ſet you above that wretched company which now you ſeem ſo much delighted with. And one thing let me recommend to you, that you keep a liſt of the young men of your ſtanding within the compaſs of your knowledge, and for the next ſeven years, obſerve what fate will attend them; ſee, if thoſe who follow not the courſe you are ſo lately entered into, will not appear in a very different light from thoſe who do; and form the induſtry and proſperity of the one, and the decay or failure of the other (if their vain ways do not blaſt them before, or as ſoon as they begin the world) you'll find abundant reaſon every day to juſtify the truth of the obſervations I have thrown together. As nothing but my affection for you could poſſibly influence me to theſe expoſtulations, I hope for a proper effect from them, if you would be thought well of by, or expect any favour from,

Your loving Father

Your maſter will, at my requeſt, ſend me word of the ſucceſs of my remonſtrances.

LETTER II.

Advice from an uncle to a young beginner, &c.

Dear Thomas,

AS you are now entering into the world, and will probably have conſiderable dealings in your buſineſs, the frequent occaſions you will have for advice from others, will make you deſirous of ſingling out among your moſt intimate acquaintance, one or two whom you would view in the light of friends.

In the choice of theſe your utmoſt care and caution will be neceſſary; for by a little miſtake here you can ſcarcely conceive the fatal effects you may hereafter experience; wherefore it will be proper for you to make a judgment of thoſe who are fit to be your adviſers by the conduct they have obſerved in their own affairs, and the reputation they bear in the world. For he who has by his own indiſcretions undone himſelf is much fitter to be ſet up for a land mark for a prudent mariner to ſhun his courſes, than an example to follow.

Old age is generally ſlow and heavy, youth headſtrong and precipitate: but there are old men who are full of vivacity, and young men repleniſhed with diſcretion; which makes me rather point out the conduct than the age of perſons with whom you ſhould chuſe to aſſociate; tho' after all, it is a never failing good ſign to me of prudence and virtue in a young man, when his ſeniors chuſe his company, and he delights in theirs.

Let your endeavours therefore be, at all adventures, to conſort yourſelf with men of ſobriety, good ſenſe and virtue: for the proverb is an unerring one that ſays, A man is known by the company he keeps. If ſuch men you can ſingle out, while you improve by their converſation you will benefit by their advice: and be ſure remember one thing, that tho' you muſt be frank and unreſerved in delivering your ſentiments, when occaſions offer, yet that you be much readier to hear than ſpeak, for to this

purpoſe it has been ſignificantly obſerved, that nature has given a man two ears, and but one tongue. Lay in therefore by obſervation, and a modeſt ſilence, ſuch a ſtore of ideas, that you may, at their time of life, make no worſe figure than they do; and endeavour to benefit yourſelf rather by other peoples ills than your own. How muſt thoſe young men expoſe themſelves to the contempt and ridicule of their ſeniors, who, having ſeen little or nothing of the world, are continually ſhutting out by open mouth, and cloſed ears, all poſſibility of inſtruction, and making vain the principal end of converſation, which is improvement. A ſilent young man makes generally a wiſe old man, and never fails of being reſpected by the beſt and moſt prudent men. When therefore you come among ſtrangers, hear every one ſpeak before you deliver your own ſentiments; by this means you will judge of the merit and capacities of your company, and avoid expoſing yourſelf, as I have known many do, by ſhooting out haſty and inconſiderate bolts, which they would have been gald to recal, when perhaps a ſilent genius in company has burſt out upon them with ſuch obſervations, as have ſtruck conſciouſneſs and ſhame into the forward ſpeaker, if he has not been quite deſtitute of inward reproach.

I have thrown together, as they occurred, a few thoughts, which may ſuffice for the preſent to ſhew my care and concern for your welfare. I hope you will conſtantly, from time to time, communicate to me whatever you ſhall think worthy of my notice, or in which my advice may be of uſe to you. For I have no pleaſure in this life equal to that which the happineſs of my relations gives me. And of this you may be aſſured; for I am, and ever muſt be,

Your loving uncle.

LETTER III.

General rules of converſation, &c. From a Clergyman to a young Tradeſman.

Dear Henry,

AS I had not an opportunity of ſaying ſo much to you as I wiſhed when you were laſt here; I ſend this to inform you of ſome things, in your general converſation, which I think would be proper for you to obſerve and amend; particularly your exceſſive itch for talking; which diſcovers itſelf alike on all occaſions. I have always flattered myſelf, that you do not want ſenſe; and am willing to hope I have not been deceived: but the dangerous ſelf-ſufficiency of moſt young men ſeems violently to have ſeized you, which, I hope, a little reflexion will remove.

The art of rendering yourſelf agreeable in converſation is worth your ſerious ſtudy; 'tis an advantage few can boaſt, tho' ſought after by all: and nothing is ſo conſtant an enemy to ſucceſs in thoſe who would excel in this art, as the harbouring an opinion of their own proficiency, before they have attained to any tolerable degree of knowledge in what they imagine themſelves poſſeſſed of. Converſation, where it is rightly managed, muſt be ſo conducted as to let each member of the company have a ſhare in the pleaſure and applauſe it affords; if you are ſix in number, after you have told a ſtory, or made any remark which gives a general ſatisfaction; you muſt conſider it the right of another to call your attention in his turn: and unleſs particularly requeſted, it betrays a great weakneſs to follow yourſelf. No doubt you love to be admired; and have not others the ſame paſſion? you believe your wit more brilliant than theirs; are you ſure that they are not of the ſame opinion as to their own? If a man ſpeaks little you muſt not from thence, conclude him willing to give up every claim to converſable merit; perhaps he cannot ſing; but to be ſure he is as deſirous of having his peculiar humour, or his dry joke, applauded, as you are to be intreated another ſong. If he is no mathematician

perhaps he is verſed in religious diſputations; if he deſpiſes plays, he may admire hiſtory; tho' he underſtand not geography he may yet know how to deſcribe the humours of mankind; and tho' he pretends not to politics, he may have a turn for ſome more uſeful ſcience. When theſe are conſidered, if his modeſty is great, you cannot oblige him more than by throwing an opportunity in his way to diſplay his capacity on the ſubject he believes himſelf moſt able to handle with advantage; for, in order to ſupport a thorough good humour, a man muſt be pleaſed with himſelf as well as with others. When this is properly taken care of, converſation ſeldom fails to prove entertaining; and to the neglect of this are owing many of the yawning hours ſpent in companies compoſed of men not incapable of behaving agreeable.

The manner of telling a ſtory is alſo worth your notice; you have known the pleaſure of hearing a long one well told; Mr French has an admirable talent in this way; but then you muſt obſerve that half the pleaſure he gives, ariſes from his happily avoiding any of the ſilly digreſſions, which are the great cauſe of a ſtory's ſeeming tedious; you never hear him mingle his relation with, I remember very well it was the ſame day that ſquire Worthy's ſon came of age.—I bought my bay nag the very day before, at ſuch a fair, being a Friday, that year;—or, I can ſcarce think of it without laughing;—or, but, however, as I was ſaying:—and a hundred more ſuch dead weights to attention. Nor does he ever praiſe a ſtory before he relates it; a fatal rock to many a good relation, for when a ſtory wants a preparatory recommendation, it ought not to be told, and even when the relation is poſſible, the generality of auditors are apt to perſuade themſelves,

The mountain labours, and a mouſe is born.

Theſe are looſe and general hints, yet by a due improvement of them you will find yourſelf very ſenſibly grow more and more agreeable wherever you converſe. An eaſy and becoming freedom you already have, and by the addition of diſcretion in your uſe of them, and

complaiſance to others, you will probably ſucceed in the deſire ſo predominant in you, of being admired by men of ſenſe and judgment. Which will be on ſmall pleaſure to, yours, &c.

LETTER IV.

A young man in buſineſs, to a father, deſiring leave to addreſs his daughter.

SIR, London, September 24.

I Hope the juſtneſs of my intentions will excuſe the freedom of theſe few lines, whereby I am to acquaint you of the great affection and eſteem I have for your daughter. I would not, Sir, offer at any indirect addreſs, that ſhould have the leaſt appearance of inconſiſtency with her duty to you and my honourable views to her; chuſing, by your influence, if I may approve myſelf to you worthy of that honour, to commend myſelf to her approbation. You are not inſenſible, Sir, by the credit I have hitherto perſeived in the world, of my ability, by God's bleſſing, to make her happy; and this the rather emboldens me to requeſt the favour of an evening's converſation with you at your firſt convenience, when I will more fully explain myſelf, as I earneſtly hope, to your ſatisfaction, and take my encouragement or diſcouragement from your own mouth. I am, Sir, mean time, with great reſpect,

Your moſt obedient and humble ſervant.

LETTER V.

From a young lady to her father, acquainting him with a propoſal of marriage made to her.

Honoured Sir, Canterbury, June 2.

I Think it my duty to acquaint you, that a gentleman of this town, by name Mr Truelove, and by buſineſs a linen draper, has made ſome overtures to my couſin Teluruth, in the way of courtſhip to me. My couſin has brought him once or twice into my company,

which he could not well decline doing, because he has dealings with him, and has an high opinion of him and his circumstances. He has been set up for four years, and has very good business, and lives in credit and fashion. He is about twenty nine years old, and a likely man enough; he seems not to want sense or manners, and is come of a good family. He has broke his mind to me, and boasts how well he can maintain me; but I assure you, Sir, I have given him no encouragement, and told him that I had no thoughts of changing my condition, yet a while, and should never think of it but in obedience to my parents; and I desired him to talk no more on that subject to me. Yet he resolves to persevere, and pretends extraordinary affection and esteem. I would not, Sir, by any means, omit to acquaint you with the beginning of an affair that would be want of duty in me to conceal from you, and shew a guilt and disobedience unworthy of the kind indulgence and affection you have always shewn to,

SIR,

Your most dutiful daughter.

My humble duty to my honoured mother, love to my brothers and sisters; and respects to all friends. Cousin Telltruth. and his wife and sister, desire their kind respects. I cannot speak enough of their civility to me.

LETTER VI.

The young gentleman's letter to the father, apprising him of his affection to his daughter.

SIR, Canterbury, June 12.

I Take the liberty, though personally unknown to you, to declare the great value and affection I have for your worthy daughter, whom I had the honour to see at my good friend Mr Telltruth's. I should think myself intirely unworthy of her favour, and of your approbation, if I could have a thought of influencing her resolution but in obedience to your pleasure; as I should

on such a supposition, offer an injury likewise to that prudence in herself, which I flatter myself, is no the least of her amiable perfections. If I might have the honour of your countenance, Sir, on his occasion, I would open myself and circumstances to you, in that frank and honest manner which should convince you of the sincerity of my affection for your daughter; and at the same time of the honourableness of my intentions. In the mean while I will in general say, that I have been set up in my business, in the linen drapery way, upwards of four years; that I have a very good trade for the time; that I had 2000*l.* to begin with, which I have improved to 2500*l.* as I am ready to make appear to your satisfaction; that I am descended of a creditable family, have done nothing to stain my character, and that my trade is still farther improvable, as I shall, I hope, enlarge my bottom. This, Sir, I thought but honest and fair to acquaint you with, that you might know something of a person who sues to you for your countenance, and that of your good lady, in an affair, that I hope may prove one day the greatest happiness of my life; as it must be if I can be blessed with that, and your dearest daughter's approbation. In hope of which, and the favour of a line, I take the liberty to subscribe myself,

Good Sir,

Your most obedient humble servant.

LETTER VII.

From a country chapman beginning trade, to a city dealer, offering his correspondence.

SIR, Leeds, Oct. 20

THE time of my apprenticeship with Mr Trusty of this town, being expired, I am just going to begin for myself in Wakefield, having taken a shop there for that purpose. And as I know the satisfaction you always gave to my master in your dealings, I make an offer to you of my correspondence, in expectation that you will use me as well as you have done him, in whatever I may write to you for. And this I the rather ex-

pect, as you cannot disoblige Mr Trusty by it, because of the distance I shall be from him; and I shall endeavour to give you equal content with regard to my payments, &c. Your speedy answer whether or not you are disposed to accept of the offer, will oblige,

Your humble servant.

LETTER VIII.

From a father to a son, to dissuade him from the vice of drinking to excess.

My dear son, October 3.

IT is with a grief proportioned to my love, which is extreme, that I understand you have of late neglected your studies, and given yourself up to the odious vice of drinking: what shall I say, what shall I do, to engage you to quit this pernicious practice, before it becomes such a habit, that it will be impossible, or at least very difficult for you to cast it off? Let me require, let me intreat you, to give a suitable attention to what I have to say on this head, which I shall offer rather as a warm friend, than an angry father; and as I address myself to your reason, I will leave it to yourself to judge of the truth of the observations I have to make you.

In the first place, with respect to health, the greatest jewel of this life, it is the most destructive of all vices: vertigoes, asthma's, palsies, gouts, appoplexies, cholics, fevers, consumptions, dropsies, stone and hypocondriac diseases, are naturally introduced by excessive drinking. All the rest of the vices together, are not so often punished with sudden death as this one: what fatal accidents, what quarrels, what breaches between friend and friend, are owing to it?

Then, in the second place, How does it deface reason, destroy all the tender impulses of nature, make a wise man a fool, and subject persons of the brightest parts to the contempt of the weakest; and even, in time, extinguish those shining qualities which constitute the difference between a man of sense and a blockhead! For, as a certain eminent author very well observes,

fools have generally ſtronger nerves, and leſs volatile ſpirits, than men of fine underſtanding; that which will rouſe the one, will make the other either ſtupid or frantic; and though it ſometimes, while the fit continues, ſtrengthens the imagination, yet it always depreſſes the judgment; and after the fit is over, both thoſe faculties languiſhes together, till, it time, it quenches the imagination, impairs the memory, and drowns the judgment.

Moſt other vices are compatible, as the ſame author obſerves, with ſeveral virtues; but drunkenneſs runs counter to all the duties of life. A great drinker can hardly be either a good huſband, a good father, a good ſon, a brother, or a good friend: it lays him open to the worſt company, and his company frequently ſubjects him to lewd women, gaming, quarrels, riots, and often murders. All other vices, even, the greateſt of vices, as ambition, unchaſtity, bigotry, avarice, hypocriſy, deteſt this unnatural and worſe than beaſtly vice; for the beaſts themſelves, even the uncleaneſt of them, know nothing of it.

Other vices indeed make men worſe, ſays this judicious author; but this alters men from themſelves, to that degree, that they differ not more from their preſent companions, than from their former ſelves. A habit of it will make the prudent inconſiderate, the ambitious indolent, the active idle, and the induſtrious ſlothful; ſo that their affairs are ruined for want of application, or by being intruſted in the hands of thoſe who turn them wholly to their own advantage, and, in the end, to the ruin of thoſe who employ them.

I have written a long letter already: yet have I ſtill more to ſay; which, that I may not tire you, I will leave to another opportunity.

Your moſt indulgent father.

LETTER IX.

From an apprentice to his maſter, begging forgiveneſs for a very great miſdemeanor.

- Good Sir,

I am ſo aſhamed of myſelf for the laſt occaſion I have given you to be angry with me, after my repeated promiſes of amendment, that I have not the courage to ſpeak to you. I therefore take this method of begging you to forgive what is paſt; and let this letter teſtify againſt me, if ever I wilfully or knowingly offend again for the future. You have children of you own. They may poſſibly offend; tho' I hope they never will as I have done. Yet, Sir, would you not wiſh they might meet with pardon, if they ſhould, rather than reprobation?——My making or my ruin, I am ſenſible, lies in your breaſt. If you will not forgive me, ſad will be the conſequence to me, I doubt. If you do, you may ſave a ſoul, as well as a body, from miſery; and I hope, Sir, you will weigh this with your uſual goodneſs and conſideration. What is paſt I cannot help; but for what is to come, I do promiſe, if God gives me health and power, that my actions ſhall teſtify for me how much I am,

Good Sir,

Your repentant humble ſervant.

LETTER X.

The maſter's anſwer.

Robert,

Your letter has affected me ſo much, that I am willing once more to paſs over all you have done. Surely at laſt I may depend on theſe your ſolemn aſſurances, and, as I hope, deep contrition? If not, be it as you ſay, and let your letter teſtify againſt you for your ingrateful baſeneſs; and for me, in my readineſs (which however ſhall be the laſt time) to forgive one that has

been so much used to promise, and so little to perform. But yet I hope for better, because I yet wish you well; being as you use me,

Yours or otherwise.

LETTER XI.

From an apprentice, where the master is too remiss in his own affairs,

Honoured Sir and Madam,

YOU desire to know how I go on in my business. I must needs say, very well in the main, for my master leaves every thing, in a manner to me. I wish he did not, for his own sake. For though I hope he will never suffer on the account of any wilful remissness or negligence, much less want of fidelity, in me, yet his affairs do not go on so well as if he was more in them, and less in the tavern. But it becomes not me to reflect upon my master, especially as what I may write or say on this head, will rather expose his failings, than do him service; for as they must be his equals that should reprove him, so all a servant can observe to others will do more harm than good to him. One thing is at present in my own power, and that is, to double my diligence, that his family suffer as little as possible by his remissness. And another, I hope, by God's grace, will be, and that is, to avoid myself, when my time comes, those failings which I see so blameable in him. And as this will be benefiting properly by the example (for that bee must be worse than a drone, that cannot draw honey from a bitter as well as a sweet flower) so it will give you the pleasure of knowing, that your good instructions are not thrown away upon me, and that I am and ever will be,

Your dutiful son.

LETTER XII.

To a country correſpondent, modeſtly requeſting a balance of accompts between them.

SIR,

I Find myſelf conſtrained, by a preſent exigence, to beg you to balance the accompt between us. Tho' matters have run into ſome length, yet would I not have applied to you, had I known ſo well how to anſwer my preſſing occaſions any other way. If it ſuits you not to pay the whole, I beg, Sir, you would remit me as much towards it as you can, without prejudice to your own affairs; and it will extremely oblige,

Your moſt humble ſervant.

LETTER XIII.

In anſwer to the preceding.

SIR,

I Am very glad I have it in my power to ſend you now, directly one hundred pounds, on accompt between us, which I do by our carrier, who will pay you in ſpecie. I will ſoon remit you the balance of your whole demand, and am only ſorry that I gave occaſion for this application for what is ſo juſtly your due. When I ſend you the reſt, which will be in a few days, if I am not greatly diſappointed, I will accompany it with an order, which will begin a new debt; which I hope to be more punctual in diſcharging, than I have been in the laſt. I am very ſincerely,

Your faithful friend,

And humble ſervant.

LETTER XIV.

From a gentleman to a lady, profeſſing an averſion to the tedious forms of courtſhip.

Dear Madam,

I Remember that one of the ancients, in deſcribing a youth in love, ſays he has neither wiſdom enough to ſpeak, nor to hold his tongue. If this be a juſt deſcription, the ſincerity of my paſſion will admit of no diſpute: and whenever, in your company, I behave like a fool, forget not that you are anſwerable for my incapacity. Having made bold to declare this much, I muſt preſume to ſay, that a favourable reception of this will, I am certain, make me more worthy of your notice; but your diſdain would be what I believe myſelf incapable ever to ſurmount. To try by idle fallacies, and airy compliments, to prevail on your judgment, is a folly for any man to attempt who knows you. No, madam, your good ſenſe and endowments have raiſed you far above the neceſſity of practiſing the mean artifices which prevail upon the leſs deſerving of your ſex; you are not to be ſo lightly deceived; and if you were, give me leave to ſay, I ſhould not think you deſerving of the trouble that would attend ſuch an attempt.

This, I muſt own, is no faſhionable letter from one who, I am ſure loves up to the greateſt hero of romance; but as I would hope that the happineſs I ſue for, ſhould be laſting it is certainly moſt eligible to take no ſtep to procure it but what will bear reflexion; for I ſhould be happy to ſee you mine, when we have both outlived the taſte for every thing that has not virtue and reaſon to ſupport it. I am, Madam, notwithſtanding this unpoliſh'd addreſs,

Your moſt reſpectful admirer,

And obedient ſervant.

LETTER XV.

To a friend, who had promiſed to lend a ſum of money to anſwer a critical exigence, and drove it off to the laſt.

Dear Sir,

YOU were ſo kind as to tell me, a fortnight ago, that you would lend me one hundred pounds on my bond, to anſwer a demand that my credit would be otherwiſe a ſufferer by. And you were pleaſed to ſay, you would have me look no further, and that I ſhould certainly have it in time: I have looked no further, Sir, and the day of payment approaching, you cannot imagine how my mind has ſuffered by being not abſolutely ſure of having the money to anſwer the demand. I hope, Sir, nothing has happen'd to make you alter your mind: for at this ſhort notice, I ſhall not know to whom to apply to raiſe it. In the utmoſt perturbation of mind, for fear of the worſt, my cerdit being wholly at ſtake, I beg your anſwer, which I hope will be to the ſatisfaction of, Sir,

Your obliged humble ſervant.

LETTER XVI.

The anſwer, excuſing the pain he had given his friend by his remiſſneſs.

Dear Sir,

I Will attend you this afternoon with the money, which I had always great pleaſure in the thought of ſupplying you with; and I am moſt heartly vexed with myſelf, for giving you the pain and uneaſineſs that muſt have attended a mind ſo punctual as yours, and in a caſe ſo critically circumſtanced. But I hope you'll forgive me, tho' I can hardly forgive myſelf. I am, Sir, as well on this, as on any other occaſion in my power,

Your ſincere friend and ſervant.

LETTER XVII.

Form a ſailor to his betrothed miſtreſs.

My dear Peggy, Barbadoes, Oct. 9.

IF you think of me half ſo often as I do of you, it will be every hour, for you are never out of my thoughts; and, when I am aſleep, I conſtantly dream of my dear Peggy. I wear my half bit of gold always at my heart, tied to a blue ribband round my neck; for true blue, my deareſt love, is the colour of colours to me. Where, my deareſt, do you put yours? I hope you are careful of it: for it would be a bad omen to loſe it.

I hope you hold in the ſame mind ſtill, my deareſt dear; for God will never bleſs you, if you break the vows you have made to me. As to your ever faithful Andrew, I would ſooner have my heart torn from my breaſt, than it ſhould harbour a wiſh for any other woman beſides my Peggy. O my dear love! you are the joy of my life: my thoughts are all of you; you are with me in all I do, and my hope and my wiſhes are only to be yours. God ſend it may be ſo.

Our captain talks of ſailing ſoon for England; and then, and then, my dear Peggy!——O how I rejoice, how my heart beats with delight, that makes me I cannot tell how, when I think of arriving in England, and joining hands with my Peggy, as we have hearts before, I hope: I am ſure I ſpeak for one.

John Arthur, in the good ſhip George, Capt. Plowſea, which is returning to England (as I hope we ſhall ſoon) promiſes to deliver this into your own dear hands; and he will bring you too, ſix bottles of citron water, as a token of my love. It is fit for the fineſt ladies taſte, it is ſo good, and is what they ſay ladies drink, when they can get it.

John ſays, he will have one ſweet kiſs of my deareſt Peggy, for his care and pains. So let him, my beſt love, for I am not of a jealous temper. I have a better opinion of my deareſt, than ſo.——But, oh, that I was in his place——One kiſs ſhould not ſerve my turn,

though I hope it may his. Yet if he takes two, I'll forgive him; one for me, and one for himself. For I love John dearly, and so you may think. Well, what shall I say more?——Or, rather, what shall I say next?——For I have an hundred things crouding in upon me, when I write to my dearest, and, alas, one has so few opportunities! But I must leave off; for I have written to the bottom of my paper. Love then to all friends, and duty to both our mothers, concludes me

Your lover till death.

LETTER XVIII.

Her ANSWER.

Dear Andrew,

FOR so I may call you now we are sure, and so my mother says. This is to let you know, that nothing shall prevail upon me to alter my promise made to you, when we parted, with heavy hearts enough, that's true: and yet I had a little incling given me, that Mr Plank's son the carpenter would be glad to make love to me: but do you think I would suffer it, no, indeed, for I doubt not your loyalty to me: and do you think I will not be as loyal to you?——To be sure I will. These sailors run such chances, said one that you and I both know. They may return, and they may not. Well I will trust in God for that, who has returned safe to his friends, their dear Andrew, so many a time. and often. They will have a mistress in every land they come to, said they. All are not such naughty men, said I, and I'll trust Andrew Trusty all the world over. For why cannot men be as faithful as women tro? and for me I am sure no love shall touch my heart but yours.

God send us a happy meeting! Let who will speak against sailors, they are the glory and the safe-guard of the land: and what would have become of Old England long ago but for them? I am sure the lazy, good, for nothing land-lubbers would never have protected u from our cruel foes. So sailors are; and ever shall be

esteemed by me, and of all sailors, my dear Andrew Trusty. Believe this from,

Your faithful, &c.

P. S. I had this letter writ in readiness to send you, as I had an opportunity, and the captain's lady undertakes to send it with hers. That is very kind and condescending: Is it not?

LETTER XIX.

Of congratulation.

SIR,

DO not admire that I am one of the last, that congratulate with you, your good fortune: the joy which I conceived was so extreme, that it could afford me no sooner the liberty to acquit myself. I know the most of your friends have prevented me, but being their satisfaction is small, I do not wonder if their diligence be the greater. As for my part, my idleness increaseth my merit, since stay and protraction proceeded only from the excess of the gladness of,

SIR,

Your most humble servant,

Tom Joyful.

LETTER XX.

ANSWER.

SIR,

SInce you take part in the good fortune, which has befallen me, you must also participate in the advantage of the new credit which it has brought me into. This I advertise you of, to the end that you let not any occasion slip, wherein you may procure a proof of my friendship, nor forget this advice which I give you, for believe me, I am impatient to have an opportunity of shewing you how much I am,

SIR,

Your friend and servant,

Timothy Grateful.

LETTER XXI.

Of thanks, &c.

SIR,

I Received the favour of yours with a kind of preſent: and know not indeed at this time any other way to ſhew my gratitude, than by my hearty thanks for the ſame. Every thing you do carries a charm with it, your manner of doing it is as agreeable as the thing done. In ſhort, Sir, my heart is full, and would overflow in your pariſe, did I not ſtop and ſubſcribe myſelf

Your moſt obliged,

May 13th, 1762. } And moſt obedient ſervant,

Thomas Thankful.

LETTER XXII.

Requiring the payment of money, which ſerves for an acquittance.

SIR,

I Find, upon ſtating the accompt between you and me, that ſeveral conſiderable ſums of money are due to me from you; wherefore having occaſion for thirty pounds, I deſire you to ſend it me by the bearer hereof (or here name the carrier) and in ſo doing you will very much oblige me.

As to the payment thereof, this letter and the bearer's acquittance, ſhall be your ſufficient ſecurity and diſcharge for ſo much money In witneſs whereof, I have hereunto ſet my hand, the ſixth day of June, 1762.

John Tradewell.

LETTER XXIII.

ANSWER.

SIR,

I Send by the bearer (or the carrier) thirty pounds according to your deſire, and have taken his receipt for it; but, becauſe you know I ſend but for ſmall parcels of goods at a time, therefore I deſire you always

for the future, when I ſend you money, that you mention in the acquittances the names of the goods for which you received the money, or at leaſt I would have you to mention what money remains unpaid; for thro' want of ſuch certain knowledge, ſome poor country tradeſmen have found great loſs, either by the maſter or their apprentices receiving the money ſent, and not mentioning for what goods. Pray take it not ill that I thus write, for I am ſatisfied of your honeſt dealing; but know not the ſervants you intruſt to receive the money, I ſend in ſmall parcels. I reſt

Your friend and chapman,

James Punctual.

LETTER XXIV.

From a ſervant in his maſter's abſence to one of his country cuſtomers.

Mr Thomas Merchant,

SIR,

I Received yours, and for anſwer ſay, I am very ſorry to hear that the goods have not anſwered your expectation; however, have placed them to the credit of your accompt, and returned others in their ſtead by Robert Derham the carrier. I know my maſter would willingly oblige you in any thing in his power, and as his faithful ſervant I have herein done my utmoſt to give you ſatisfaction, who am

To Mr Tho. Merchant, clothier in Halifax.

Your moſt humble ſervant,

James Windſor.

LETTER XXV.

From a youth at ſchool in Durham to his parents in London.

Durham, January 12. 1761.

Honoured father and mother,

I Received your kind letter of the 14th of November paſt, and alſo the ſeveral things therein mentioned, by the Newcaſtle waggon, for which I return you my moſt humble and hearty thanks, they coming very ſeaſonably for the relief of my occaſions.—I begin to make pretty good improvement in my learning now (tho' at firſt, it ſeemed a littlei rkſome and hard) and I hope to gain the point at laſt for which you ſent me hither. Pray accept of my moſt humble duty to yourſelves, and give my kind love to my brothers and ſiſters, and to my old play fellows and neighbours; this being all at preſent from,

Honoured parents, your dutiful ſon,
Peter Wiſe.

LETTER XXVI.

From an apprentice to his friends.

Honoured father and mother,

BY theſe I let your know, that by your care and conduct I am well ſettled, and pleaſed with my ſtation, and could not but in duty return you my hearty thanks in a grateful acknowledgment of your love and tender care of me: I will endeavour to go through my buſineſs chearfully; and having begun well, I hope I ſhall perſevere to do ſo to the end, that I may be a comfort to you hereafter, and in ſome meaſure make a return of your love and kindneſs to me, who am

Your dutiful, obedient ſon,
and moſt humble ſervant,
Jeremiah Careful.

LETTER XXVII.

Of recommendation.

SIR,

THE bearer hereof, James Roberts, I send you, as one whose honesty you may rely on, and my experience of his conduct and fidelity give me a certain kind of confidence in recommending him to you; but you know me, Sir, and I believe you cannot in the least think that I would recommend any one to you, if I had the least umbrage of suspicion or doubt concerning their probity. I am Sir,

Your real friend and humble servant,

James Goodman.

LETTER XXVIII.

To a country chapman.

Mr James Tradewell,

SIR,

YOU and I have formerly had trading together, and it is not my fault that we do not continue so to do; for assure yourself, I have a great value and respect for you, and on that account none shall be more ready to oblige you in what I may; and pray let us once more re-assume our dealing together. and you shall find, that for any goods you have occasion for in my way none shall use you more kindly than,

SIR,

Your real friend and humble servant,

George Punctual.

LETTER XXIX.

By way of petition.

Honoured Sir,

I am uncertain whether my late misfortunes have come to your knowledge; however I most humbly pre-

ſume on your good nature, being aſſured by ſundry examples of your compaſſion, that you will think of, and take pity on the diſtreſſed: therefore as an object truly deſerving compaſſion, I moſt humbly implore and petition you to conſider the many loſſes and diſappointments that I have met with in my wayward and unlucky fortune, which have reduced me to ſuch neceſſitous circumſtances, that I cannot poſſibly proceed in my affairs: you was pleaſed once to ſtile me your friend, and ſo I was indeed; and ſo I would certainly be now, and ſhew it by a ſignal proof of kindneſs, if our circumſtances were changed, by ſtanding between you and misfortune, and ſcreening you from the malevolent and inauſpicious influences of croſs-grained ſtars. I doubt not, Sir, but your generoſity and goodneſs is as great; and I hope with all humility, you will be pleaſed to interpoſe your good offces, &c. between unlucky fortune, and,

SIR,

Your very humble ſervant,

George Shipwreck.

LETTER XXX.

To a friend to deſire him to endeavour to end a difference between two of their friends.

Loving couſin,

AFTER my love to you, this is to let you know, that two of your friends D. N. and J. F. are going to law upon a trifling occaſion. I pray come over and ſee to reconcile them, or ſend your advice how I may labour to do it, and I ſhall be very much obliged to you. I remain

Your affectionate kinſman and humble ſervant,

C. T.

LETTER XXXI.

The answer, with advice.

Dear friend,

WITH my unfeigned love to you, I received your letter, and it grieves me to hear that our friends should be for going to law, and not compelled to it; for then much money is spent upon lawyers, to end their differences by jury-men, when two friends may do it better.

But if one of the parties is for going to law, and the other not, then he that is against going to law, is the most christian, and is not to be blamed, tho' he use the law of the nation to defend himself, neither indeed, can he avoid it, if his adversary seeks revenge, and so forces him to spend his money in his defence.

But you desiring my advice about reconciling those two friends, they having not yet fee'd lawyers, persuade the man that is for going to law, that two friends chosen by both parties may end their differences, or one person only.

And when they have nominated two to end it, then persuade the two parties to put into the hands of those arbitrators 5 *l.* or more a piece, according to the value of the trespass. This agreed on, next,

Let the parties sign and seal general releases to each other; then the arbitrators must dispose of the money as they see good, to the party, that has received the wrong, &c.

Thus differences among friends may be composed at a much cheaper and better rate than by trial at the assizes.

But yet 'tis best, when contending parties agree by themselves, as Christ commands, Mat. xiii. 15. and forgive trespasses, Mat. iv. 12.

Beside, this, having general releases, it cuts off all former differences, and saves from divers expences, and from bonds of arbitrators and awards, which, tho' they cost money often prove of no effect.

Would to God the advice above, of reconciling men

at difference, would take effect in general, then would peace flouriſh, &c.

I remain your friend,

Jerem. Peaceable.

LETTER XXXII.

From a gentleman to a gentlewoman, to beg pardon for an offence.

Madam,

'TIS in vain to contend with my judge, and therefore, tho' I know my fault has been aggravated beyond what it could juſtly bear, yet I will rather ſubmit myſelf to your ſentence than go about to extenuate my crime: I am guilty enough that I have offended you tho' I never deſigned it; and when you have done yourſelf juſtice, by inflicting upon me what you think I merit for my offence, than I will plead my innocency, and let you know I always was ſo far from ſaying anything that might reflect upon your fame, that in my opinion, not innocence itſelf is more unſpotted, or can unſullied ſnow appear more white: 'tis true, I am guilty to give you ground to think I have offended; but my offence is my misfortune rather than my fault. But, Madam, what if I appeal from your ſeverer juſtice to your mercy? I know you are not inexorable, nor did you ſuck the breaſts of wolves and tygers: and ſince there's ſo much ſweetneſs in your eyes, there needs muſt be ſome pity in your heart, at leaſt ſo far as to forgive a poor repenting criminal. And ſince you are ſuch a bright idea of the author of all goodneſs, you cannot, but, like him, delight in ſhewing mercy. I ſhall henceforth endeavour to be like Cæſar's wife, not only free from guilt, but from ſuſpicion: and further, ſhall, to expiate my offence, remain

Your truly ſorrowful,

And much afflicted humble ſervant;

Roger Begpardon.

LETTER XXXIII.

ANSWER.

SIR,

I Received your letter, and muſt let you know, that whatſoever reflects upon my fame (which is far dearer to me than my life) tho' at the moſt remote diſtance, is what I cannot but think a fault, and therefore know not how you can be innocent; and, indeed, to plead your innocence, is to accuſe me of injuſtice, in charging you with a crime; but from what you write, I am inclined to believe, that in what you ſaid, you deſigned no injury to me: and that it was a crime of inadvertence rather than of malice. And for that reaſon upon your profeſſion of repentance, I freely pardon you; but charity itſelf does not injoin me to hug the man I pardon in my boſom: you muſt not expect therefore to be admitted to the former freedoms you enjoy'd, ſince you have made ſo ill an uſe of 'em, till you have given ſome more ſubſtantial proofs of the ſincerity of your repentance. And tho' I pardon this your firſt offence, yet if you ſhould relapſe into you former follies, you muſt expect a much ſeverer treatment: for then I ſhall no more eſteem myſelf, as I now do,

Your reconciled friend to ſerve you,

Sarah Forgivewell.

LETTER XXXIV.

From a gentleman to his miſtreſs, who ſeeing no hopes of ſucceſs, reſpectfully withdraws his ſuit.

Madam,

I Make no doubt but this will be the welcomeſt letter that you ever received from me; for it comes to aſſure you, that it is the laſt trouble you will ever have from me. Nor ſhould I have ſo long with-held from you this ſatisfaction, had not the hope your brother gave me, that in time I might meet with a happier fate, made me willing to try every way to obtain your fa-

vour. But I ſee all the hopes given me by his kind conſideration for me, and thoſe that my own preſumption have made me entertain, are in vain; and I will therefore rid you of ſo troubleſome an importuner, having nothing to offer now but my ardent wiſhes for your happineſs, and theſe, Madam, I will purſue you with to my life's lateſt date.

May you, whenever you ſhall change your condition, meet with a heart as paſſionately, and as ſincerely devoted to you as mine! and may you be happy for many, very many years, in the man you can honour with your love: for, give me leave to ſay, Madam, that in this my end will be in part anſwered, becauſe it was moſt ſincerely your happineſs I had in view, as well as my own, when I preſumptuouſly hoped, by contributing to the one to ſecure the other. I am, Madam, with the higheſt veneration,

Your moſt obedient humble ſervant.

LETTER XXXV.

From a father to a daughter in ſervice, on hearing of her maſter's attempting her virtue.

My dear daughter,

I Underſtand, with great grief of heart, that your maſter has made ſome attempts on your virtue, and yet that you ſtay with him. God grant that you have not already yielded to his baſe deſires! For when once a perſon has ſo far forgotten what belongs to himſelf, or his character, as to make ſuch an attempt, the very continuance with him, and in his power, and under the ſame roof, is an encouragement for him to proſecute his deſigns. And if he carries it better, and more civil at preſent, it is only the more certainly to undo you when he attacks you next. Conſider, my dear child, your reputation is all you have to truſt to. And if you have not already, which God forbid! yielded to him, leave it not to the hazard of another temptation, but come a-

way directly (as you ought to have done on your own motion) at the command of

Your grieved and indulgent father.

LETTER XXXVI.

The daughter's anſwer.

Honoured Sir,

I Received your letter yeſterday, and am ſorry I ſtayed a moment in my maſter's houſe after his vile attempt. But he was ſo full of his promiſes of never offering the like again, that I hoped I might believe him; nor have I yet ſeen any thing to the contrary: but am ſo much convinced, that I ought to have done as you ſay, that I have this day left the houſe, and hope to be with you ſoon after you will have received this letter. I am

Your dutiful daughter.

PRECEDENTS in Law and Buſineſs, that all young men ought to know and be acquainted with.

Superſcriptions for Letters.

TO the king, or, To the king's moſt excellent majeſty.

To the queen, or, To the queen's moſt excellent majeſty.

To the prince, or, To his royal highneſs. To the princeſs, or, To her royal highneſs.

And in caſe to the lords ſpiritual, viz. To his grace the lord archbiſhop of Canterbury; To the right reverend father in God, &c. The ſame to the archbiſhop of York. If to the other biſhops, To the right reverend father in God, Archibald lord biſhop of, &c. And to the inferior clergy, To the reverend doctor, &c. To the reverend Mr. &c.

To write to temporal lords, viz.

To his grace the duke of ———

To the right honourable the marquis of ———

To the right honourable the earl of ———

To the right honourable the lord viſcount ———

To the right honourable the lord ———

All the ſons of the nobility, tho' not the immediate heirs, are to be dignified with the title of honourable, as their due by birth-right. And to a knight and baronet by virtue of his patent, the title of honourable and right worſhipful is given. As likewiſe the former to a knight, and worſhipful to an eſquire.

Every privy counſellor, though not a nobleman is ſtiled right honourable: all ambaſſadors have the ſtile of excellency, as likeways hath the lord lieutenant of Ireland, and the captain general of his majeſty's forces when in being; nor has the mayor of London, during his mayoralty, a leſs title than right honourable; and the ſhe-

riffs, during their office are ſtiled right worſhipful; nor does any thing leſs than the title of eſquire extend to the mayors of any corporation during their office.

Directions for the beginning of Letters.

TO the king, Sir, or, May it pleaſe your majeſty.

To the queen, Madam, or, May is pleaſe your majeſty.

To the prince, Sir, or, May it pleaſe your royal highneſs.

To a duke, My lord, or, May it pleaſe your grace.

To a ducheſs, Madam, or, May it pleaſe your grace.

To a marquis, My lord, or, May it pleaſe your lordſhip.

To a marchioneſs, Madam, or, May it pleaſe your ladyſhip.

To an earl, viſcount, or baron, Right honourable, or, May is pleaſe your lordſhip In viſcount or viſcounteſs, ſound not the *ſ* in the firſt ſyllable.

To a counteſs, viſcounteſs, or baronneſs, Madam, or, Right honourable, or, May it pleaſe your ladyſhip.

To a knight, Sir, or, Right worſhipful; and to his lady, Madam, or, May it pleaſe your ladyſhip

To a mayor, juſtice of peace, eſquire, &c. Sir, or, May it pleaſe your worſhip.

At ſubſcribing your name end with the ſame title you began with. As, My lord, Your lordſhip's, &c.

Of Wills and Teſtaments.

A Will, according to the common acceptation, is the declaration of a perſon's mind or intent, in relation to what he would have done after his death. The common law calls that a will, whereby lands and tenements are deviſed; but when it concerns only chattles, viz. moveables or what is not inheritable, it is called a teſtament; where lands are given by will it is termed a

deviſe; and where goods and chattles, commonly termed a perſonal eſtate, are bequeathed, it is called a legacy.

Deviſes of land, *&c.* muſt be in writing, ſigned by the deviſor or perſon giving, generally called the teſtator, or ſome perſon by his expreſs direction, in the preſence of three credible witneſſes. If a perſonal eſtate of above the value of thirty pounds be bequeathed by word of mouth, which the law calls a nuncupative will, it muſt be likewiſe done in the preſence of three witneſſes.

FORM of a WILL.

IN the name of God, Amen. I, A. B. of, *&c.* being thro' the abundant mercy and goodneſs of God, tho' weak in body, yet of a ſound and perfect underſtanding and memory, do conſtitute this my laſt will and teſtament, and deſire it to be received by all as ſuch: *imprimis*, I moſt humbly bequeath my ſoul to God, my Maker, beſeeching his moſt gracious acceptance of it, thro' the all ſufficient merits and mediation of my moſt compaſſionate Redeemer, Jeſus Chriſt, who gave himſelf to be an attonement for my ſins, and is able to ſave, to the uttermoſt, all that come unto God by him, ſeeing he ever liveth to make interceſſion for them, and who, I truſt, will not reject me, a returning penitent ſinner, when I come to him for mercy; in this hope and confidence, I render up my ſoul with comfort, humbly beſeeching the moſt bleſſed and glorious Trinity, one God moſt holy, moſt merciful and gracious, to prepare me for the time of my diſſolution, and then to take me to himſelf into that peace and reſt, and incomparable felicity, which he has prepared for thoſe that love and fear his holy name, Amen, bleſſed be God. *Imprimis*, I give my body to the earth, from whence it was taken, in full aſſurance of its reſurrection from thence at the laſt day: as for my burial I deſire it may be decent, without pomp, or ſtate, at the diſcretion of my dear wife, and my executors hereafter named, who, I doubt not will manage it with all requiſite prudence. As to my worldly eſtate, I will and poſitively order, That all my debts be paid. *Item*, I give to my dear and loving wife, for term of life, this houſe wherein I now dwell, with all the furniture,

and the lands and tenements that ly about it; and after her death, to my only ſon G. and his heirs and aſſigns for ever; to whom I leave alſo, from the time of my death, my other two eſtates ſituate in the pariſh of T. he paying to each of his ſiſters, D. and F. 500*l*. And if he die before them, and without iſſue, then his land (all but the value of 5000*l* which I freely impower him to diſpoſe of as he ſhall think fit) ſhall deſcend, and belong equally to thoſe my two daughters. My poor debtors, who owe me ſome ſmall matters, which, becauſe they are in low condition, and not well able to pay them, I freely remit them all, forgiving ſuch my debtors, as I deſire God ſhould forgive my debts for Chriſt's ſake. I give 60*l*. to be diſtributed according to the diſcretion of my executors, among ſuch of my neighbours of this pariſh as they ſhall apprehend moſt to want ſuch aſſiſtance, but who do not at preſent receive alms, nor have any allowance from the pariſh. I give 30*l*. towards the good work for teaching poor children to read, and to ſay their catechiſm, in charity ſchools. The ſmall remainder of my eſtate I give to my very good friends and dear and kind relations, G. R. and L. O. to be divided equally between them: and do conſtitute them executors of this my laſt will and teſtament, and truſtees for my wife and children. In witneſs whereof, I have hereunto ſet my hand and ſeal, the 3d day of June, in the year of our Lord, 1762.

A. B. (L. S.) here I take off my ſeal, and do declare this to be my laſt will and teſtament.

Witneſs, T. B.
R. T.
R. B.

Another WILL.

IN the name of God Amen. I, A. M. of, &c. being in perfect health (praiſed be God) do make this my laſt will and teſtament as followeth. *Imprimis*, I give to my daughter L. M. 200 pounds of, *&c.* *Item*, I give to my daughter C. M. 500 pounds of like lawful money and the box in the room where I ly, marked (P. Q.) and all the linen therein, with ſome other goods, and the reſt and reſidue of my goods and chattles, and perſonal eſtate, after payment of my debts, legacies, and

funeral expences; and unto my ſon S. M. whom I make ſole executor of this my laſt will and teſtament. I give, deviſe, and bequeath to him and his heirs, all, and every my meſſuages, lands, tenements, and hereditaments whatſoever and whereſoever, which I alſo charge with the payment of my ſaid legacies. In witneſs whereof I have hereunto ſet my hand and ſeal, the 23d day of June, and in the year of our Lord, 1762.

Sealed, publiſhed and declared by the above named A. M. for and as his laſt will and teſtament, in the preſence of us, A. B. C. D. E. F.

Obſervations concerning wills and teſtaments.

THE party who ſigns and ſeals a will, is to do it in the preſence of three witneſſes, who are to ſet their hands to it (not under three) and it is not much matter whether the witneſſes hear the will read or no, ſo as they hear the party ſay he acknowledgeth that writing to be his will to which he ſet his hand and ſeal; for if they did hear it read, it cannot be ſuppoſed that they can remember the contents thereof. A man above fourteen years of age may make a will of his goods, and a woman above twelve, but neither can will their lands until twenty one years.

If a man dies without a will, and leaves both free-lands and goods, his wife will have the third part of the profits of the land, during her life, and the third part of the goods for ever; and the next of kin to the husband the other two third parts. But he that makes a will, and leaves his wife a certain ſum to be paid her yearly, during her life, by his executor, ſhould alſo give her ſome of his moveable goods.

If a man dies without a will ſigned and ſealed, leaving many children, the eldeſt ſon claims all the land; but, if he leaves daughters only, they will be co-heirs to all free land.

Copy hold land is not given by will, but paſſed by ſurrender in court.

To will lands to F. F. for ever; or to G. H. and his aſſigns, this is but for life; but I give and demiſe unto E. F. his heirs and aſſigns for ever, ſo G. H. may ſell it.

The word executor, is the name given to him that is to ſee the will performed; but if it be a woman, ſhe is called in the will executrix.

Set your houſe in order while you are in health,
For a (will) teſtament is of force after men are dead,
Heb ix. 17. *but not before.*

For if a man hath ſealed his will and delivered it to a friend to keep, he may make another, which makes the former will void.

The FORM of a LETTER of ATTORNEY, to execute a particular buſineſs.

KNOW all men by theſe preſents, that I, A B. of C. in the country of D, yeoman, for divers good cauſes and conſiderations, me hereunto moving, have made, ordained, conſtituted and appointed, and by theſe preſents, do make, ordain, conſtitute, and appoint my truſty friend I K, of L, gent. my true and lawful attorney, for me, in my name, and to my uſe, to aſk, demand recover and receive of, and from B C, of, *&c.* the ſum of *&c.* giving, and by theſe preſents, granting to my ſaid attorney, my ſole and full power, and authority, to take purſue, and follow ſuch legal courſes for the recovery, receiving, and obtaining of the ſame, as I myſelf might or could do, were I perſonally preſent; and upon the receipt of the ſame, acquittances or other ſufficient diſcharges for me, and in my name, to make ſign, ſeal and deliver; as alſo one or more attorney or attorneys under him to ſubſtitute and appoint, and again at his pleaſure to revoke; and farther to do, perform and finiſh for me, and in my name, all and ſingular thing or things, which ſhall or may be neceſſary, touching and concerning the premiſes, as fully, thoroughly and entirely, as I the ſaid A B, in my own perſon might, or could do in or about the ſame: ratifying, allowing, and confirming whatſoever my ſaid attorney ſhall lawfully do, or cauſe to be done, in and about the execution of the premiſes

by virtue of these presents. In witness whereof, I have hereunto set my hand and seal, the 12th day of September, in the 2d year of the reign of our sovereign lord George III. by the grace of God, king of Great Britain, &c. and in the year of our Lord 1762.

Revocation of a Letter of Attorney.

KNOW all men by these presents, that whereas I ——— of ——— in the county of ——— yeoman, upon the trust and confidence which I had in——— ——— of——— gent. by letter of attorney under my hand and seal, bearing date———, did make, ordain, constitute and appoint the said———my lawful attorney, for me, and in my name, and to my use, to ask, demand, recover and receive, of and from———of——— bookseller, the sum of———, as thereby more at large may appear: now know ye that I the said———, for divers good causes and considerations me hereunto moving, have, and by these presents do revoke, disanull and make void the said letter of attorney and all power and authority, therein to him the said———given. In witness, &c.

Indenture for an Apprentice.

THIS indenture witnesseth that——— ———son of ———, &c. doth put himself apprentice to———, shoemaker, to learn his art or mystery, and with him after the manner of an apprentice to serve, from the day of the date hereof for and during the term of seven years next ensuing; during all which term, the said apprentice, his said master faithfully shall serve, his secrets keep and all his lawful commands every where gladly do; he shall do no damage to his master, nor see it to be done by others, without letting or giving notice thereof to his said master: he shall not waste his master's goods, nor lend them unlawfully to any. He shall not commit fornication, nor contract matrimony during the said term; he shall not play at cards, dice or any other unlawful game, whereby his master may be damaged with his own goods or the good of others; he shall not ab-

ſent himſelf day or night from his ſaid maſter's ſervice unlawfully; nor haunt ale-houſes, taverns, or play-houſes; but in all things behave himſelf as a faithful apprentice, in the trade or myſtery he now followeth; and the ſaid maſter ſhall procure and provide for him ſufficient meat, drink, apparel, lodging, waſhing and all other neceſſaries during the ſaid term. And for the true performance of all and every the ſaid covenants and agreements, each of the ſaid parties bindeth himſelf unto the other firmly by theſe preſents. In witneſs whereof, they have interchangeably ſet their hands and ſeals hereunto, this twentieth day of September, in the ſecond year of the reign of our ſovereign lord George III. King of Great Britain, France and Ireland, &c. and in the year of our Lord, 1762.

Letter of Attorney from a Seaman.

KNOW all men by theſe preſents, That I,———, mariner, now belonging to his majeſty's ſhip the Ann, for divers good cauſes and conſiderations me hereunto moving, have, and by theſe preſents do make, ordain, conſtitute and appoint my truſty friend———, citizen and baker of Briſtol, my true and lawful attorney for me, and in my name, and for my uſe, to aſk, demand, and receive of and from the right honourable the treaſurer, or pay-maſter of his majeſty's navy, and commiſſioners for prize money, and whom elſe it may concern, as well all ſuch wages, and pay, bounty money, prize-money, and all other ſum and ſums of money whatſoever, as now are, and which hereafter ſhall or may be due or payable unto me: alſo all ſuch penſions, ſalaries, ſmart money, and all other monies and things whatſoever, which now, or at any time hereafter is, or ſhall be due to me for my ſervice, or otherways in any of his majeſty's ſhip or ſhips, frigates or veſſels: giving and hereby granting unto my ſaid attorney full and whole power to take, purſue, and follow ſuch legal ways and courſes for the recovery, obtaining and diſcharging the ſaid ſum and ſums of money, or any of them, as I myſelf might, or could do, were I perſonally preſent. And I do hereby ratify, allow, and confirm all and

whatsoever my said attorney shall lawfully do, or cause to be done, in and about the execution of the premises, by virtue of these presents. In witness, &c.

A BOND.

KNOW all men by these presents, That I (Robert Scott, of the county of Durham, merchant) am held, and firmly bound unto (James Syms of Doncaster, in the county of York, Esq.) in the sum of (Two hundred) pounds of good and lawful money of Great Britain, to be paid to the said (James Syms) his heirs, executors, administrators, or assigns: to which payment, well and truly to be made, I bind myself, my heirs, executors, administrators, or assigns, firmly by these presents. Sealed with my seal. Dated the (first day of June) in the 2d year of the reign of our sovereign lord (George the third) by the grace of God, king of Great Britain, France and Ireland, defender of the faith, and in the year of our Lord God (One thousand seven hundred and sixty two.)

The CONDITION.

THE condition of this obligation is such, that if the above bounden (Robert Scott) his heirs, executors or administrators, do well and truly pay, or cause to be paid, unto the above mentioned (James Syms) his executors, administrators, or assigns, the full sum of (one hundred pounds) with lawful interest for the same, of good and lawful money of Great Britain, on the (first day of January next) ensuing the date hereof; then this obligation to be void, or else to remain in full force.

Sealed and delivered (being first legally stamped) in presence of — Robert Scott.
F. G.
H. I.

☞ When a bond is given in consideration of the value received, the bond is always to be made for double the value in the condition.

What is to be varied, and made agreeable to the circumstances before you, is in those words inserted between ().

A Condition to ſtand to the Award of Arbitrators.

THE condition of this obligation is ſuch, that if the above-bounden (James Sly of Newcaſtle, merchant) his heirs, executors and adminiſtrators, and every of them, do and ſhall in all things, well and truly ſtand to, obey, abide by, perform, fulfil, and keep the award, order, arbitrament, final end and determination of (Andrew Mills and James Mills, of Briſtol, merchants) arbitrators indifferently named, elected, and choſen, as well on the part and behalf of the above bounden (James Sly) as of the above named (James Syms) to arbitrate, award, order, judge, and determine of and concerning all manner of actions, cauſes and cauſes of actions, ſuits, bills, bonds, ſpecialities, judgments, executions, extents, accompts, debts, dues, ſum and ſums of money, controverſies, treſpaſſes, damages and demands, whatſoever, at any time or times heretofore had, made, moved, brought, committed, ſued, proſecuted, done, ſuffered committed, or depending by or between the ſaid parties, ſo as the award be made, and given up in writing, under their hands and ſeals ready to be delivered to the ſaid parties on or before the (next enſuing the date above mentioned:) but if the ſaid arbitrators do not make ſuch award, of and concerning the premiſes, by the time aforeſaid; that then if the ſaid (James Sly) his heirs, executors and adminiſtrators, for his and their parts and behalf, do in all things well and truly ſtand to, obey, abide, perform, fulfil, and keep the award, order, arbitrament, umpirage, final end and determination of (John Jack of Lincoln, Eſq;) umpire indifferently choſen between the two parties, to end the ſaid matter anddifferences, ſo as the ſaid umpire do make his award and umpirage of, and concerning the premiſes, and deliver the ſame in writing under his hand and ſeal, to the parties, on or before the (day of) next enſuing the date above ſaid, then this obligation to be void, or elſe to remain in full force.

Sealed and delivered (being legally ſtamped) in preſence of, &c. James Sly, (L. S.)

Note, Both the parties are in this caſe to be mutually bound, *mutatis mutandis*; and if there be no umpire admitted of, the latter part of the condition, beginning [But if the ſaid arbitrators] is to be omitted.

The Form of an Umpirage of Award.

TO all people, to whom this preſent writing ſhall come; I (John Jack of Lincoln, Eſq;) umpire, indifferently choſen between (James Slight, and John Fox of London, merchants) ſend greeting; Now know ye, that I the ſaid (John Jack) having deliberately heard, conſidered, and underſtood the griefs, allegations, and proofs of both the ſaid parties, and being willing, as much as in me lieth, to ſet the ſaid parties at unity and good accord, do by theſe preſents, arbitrate, award, order, deem, decree and judge, that the ſaid (James Slight) his executors, adminiſtrators, or aſſigns, do, and ſhall well and truly pay, or cauſe to be paid unto the ſaid (John Fox) his executors, adminiſtrators, or aſſigns, the ſum of ( ) of lawful money of Great Britain, on the (day of) next enſuing the date of theſe preſents; and that upon payment thereof, the ſaid (James Slight and John Fox) ſhall, at their own proper coſts and charges, ſeal, ſubſcribe, and as their ſeveral acts and deeds, deliver each to the other, a general releaſe in writing, of all matters, actions, ſuits, cauſes of actions, bonds, bills, covenants, controverſies, and demands whatſoever from the beginning of the world to the (ſixteenth day of July laſt paſt) and in the (2) year of our ſovereign lord (George III.) king of Great Britain, *&c.* In witneſs whereof I have hereunto ſet my hand and ſeal, the (25th day of June 1762)

Sealed and delivered (being duly ſtamped) in preſence of *&c.* John Jack. [L. S.]

A Letter of Licence to a Debtor.

TO all people, to whom this preſent writing ſhall come; we whoſe names are hereunder ſubſcribed, and ſeals affixed, creditors of [D. F. of Briſtol, mer-

chant] ſend greeting. Whereas the ſaid [D. F.] on the day of the date of theſe preſents, is indebted unto us ſeverally, in divers conſiderable ſums of money, which at preſent he is not able to ſatisfy unto us, without reſpite, and time to be given unto him for the payment thereof; Know ye therefore, That we the ſaid creditors, for divers good cauſes and conſiderations, us thereunto moving, have given and granted, and by theſe preſents, do give and grant unto the ſaid [D. F.] our ſure and ſafe conduct and free licence, that the ſaid [D. F.] ſhall, and may ſafely come and go, and reſort unto us, and every one of us his ſaid creditors, to compound and take order with us, and every one of us for all and every of our ſaid debts, and to go about any other buſineſs to any other perſon or perſons whatſoever, without any trouble, ſuit, arreſt, attachment, or other moleſtation to be offered or dore to him the ſaid [D. F.] his wares goods, monies, or other merchandizes whatſoever, by us, or any of us, or by the heirs, executors, adminiſtrators, partners, or aſſigns of us, or any of us, or by our, or any of our means or procurement, to be ſought or procured to be done, from the day of the date hereof, unto the full end and term of [one whole year] next enſuing. And we the ſaid creditors, whoſe names are hereunderwritten, do hereby covenant and grant, and every one of us for his own part, his executors and adminiſtrators covenanteth and granteth, to and with the ſaid [D. F.] that if any trouble, wrong, damage, or injury ſhall be done unto him the ſaid [D. F.] either in his body, goods, or chattles, or any of them, within the ſaid term of [one year] next coming after the date hereof, by us, or any of us, his ſaid creditors, or by any other perſon or perſons, by or through the procurement, conſent, or knowledge of us, or any of us, contrary to the true intent and meaning of this our preſent writing of ſafe conduct, that then the ſaid [D. F.] by virtue of theſe preſents, ſhall be diſcharged and acquitted forever towards and againſt him and them of us, his and our heirs, executors, adminiſtrators, partners, or aſſigns, and every one of them, by whom, and by whoſe means, he ſhall be arreſted, troubled and attached, or damnified, of all manner of actions, ſuits, quarrels, debts, and de-

mands, either in law or equity, from the beginning of the world, to the day of the date hereof; in witneſs whereof, we have hereunto ſet our hands and ſeals the [fourth day of July] Anno Domini 1762.

Sealed and delivered (being firſt duly ſtamped) in preſence of, &c. — A. C. [L. S.] C. D. [L. S.] E. F. [L. S.]

A BILL of SALE.

KNOW all perſons whom it may concern, That I [John Trader of Kendal, in the county of Weſtmoreland, weaver] for and in conſideration of the ſum of [one hundred pounds] of lawful money of Great Britain, to me in hand paid, by [Daniel Dike of London, Eſq;] the receipt whereof I do hereby acknowledge, have bargained, ſold, and delivered, and by theſe preſents, according to the due form of law, do bargain, ſell, and deliver unto the ſaid [Daniel Dike] forty pieces of Kendal cotton, one hundred pairs mens hoſe, fifty womens do. fifteen boys do. ſealed up with my ſeal. To have and to hold the ſaid bargained premiſes, unto the ſaid [Daniel Dike] his executors, adminiſtrators, and aſſigns forever. And I the ſaid [John Treder] for myſelf, my executors and adminiſtrators the ſaid bargained premiſes unto the ſaid [Daniel Dike] his executors, adminiſtrators and aſſigns, againſt all perſons, ſhall and will warrant, and for ever defend, by theſe premiſes: [If the bargained premiſes be redeemable, by a limited time, a proviſo of this nature is added.] Provided nevertheleſs, that if I the ſaid [John Trader] my executors, adminiſtrators and aſſigns, or any of us, do and ſhall well and truly pay, or cauſe to be paid unto the ſaid [Daniel Dike] his executors, adminiſtrators, or aſſigns, the ſum of [one hundred and three pounds] as principal and intereſt, lawful money of Great Britain, on the [thirtieth of October, next enſuing the date hereof] for redemption of the bargained premiſes; then this preſent bill of ſale ſhall be void, and of no effect: but if default be made in the payment of the ſaid [one hundred and three pounds] in part or in the whole, contrary to the manner and form aforeſaid, that then it ſhall remain and be in full force and

virtue: in witneſs whereof, I have hereunto ſet my hand and ſeal, the [twenty ſixth day of June] in the year of our Lord [1762]

Sealed and delivered, *&c.* John Trader. [L. S.]

A general Releaſe.

KNOW all men by theſe preſents, That I [Thomas Stivens of London, grocer] have remiſſed, releaſed, and for ever quitted claim, and by theſe preſents, do for me, my heirs, executors and adminiſtrators, remiſe, releaſe, and for ever quit claim, unto [Jeremiah Bucks, citizen and mercer of London] his heirs, executors and adminiſtrators, all and all manner of actions, cauſes and cauſes of actions, ſuits, bills, bonds, writings obligatory, debts, dues, duties, accompts, ſum and ſums of money, judgments, executions, extents, quarrels, controverſies, treſpaſſes, damages and demands whatſoever, both in law and equity, or otherways howſoever, which againſt the ſaid [Jeremiah Bucks] I ever had, now have, and which I, my heirs, executors and adminiſtrators, ſhall or may have, claim, challenge or demand for or by reaſon or means of any matter, cauſe or thing, from the beginning of the world, to the day of the date of theſe preſents: in witneſs whereof, I have hereunto ſet my hand and ſeal, the [twelfth day of July] and in the year of our Lord [1762.]

Signed, ſealed and delivered [be-
in firſt legally ſtamped] *&c.* Tho. Stivens. [L. S.]

Of Wives, Children and Servants.

THE woman, at her marriage, becomes wholly the man's, together with all her moveable goods, and if goods be given to a married woman, they immediately become her husband's: ſhe cannot let, ſet, ſell, give away, or alienate any thing without her husband's conſent, not her very apparel, which at her husband's deceaſe goes to the executor. or adminiſtrator of her huſband (excepting her neceſſary apparel) which with the conſent of her husband, ſhe may give by will, not otherways in our Engliſh laws.

The wife, after her husband's death, having no jointure ſettled before marriage, may challenge the third part of his yearly rents of free-lands, for her life; and alſo the thirds of the rents of ſuch free lands as he ſold in his life time, if ſhe did not conſent to a fine; but ſhe can claim no thirds of ſuch lands as her husband buys when he has ſold them again, and dieth, if he puts another perſon's name in the deed beſide himſelf, when he bought them. But if her husband dieth without a will in writing, leaving no child, ſhe will claim the thirds, as above, and a third part of the goods for ever, and the other two thirds go to the next of his kindred.

But if ſhe be the wife of a freeman of the city of London (he dying without a will, leaving no child, as before) ſhe will challenge by law, three parts of four of her husband's goods and chattles, and one third of the profits of his free lands for life, the goods for ever. By a late act of parliament perſons ſince made free are not bound by this law.

The husband muſt anſwer to his wife's faults; if ſhe wrong another by her tongue, or by treſpaſs, he muſt make ſatisfaction; and pay the debts that ſhe cauſeth, except he did before give notice; that they ſhould not truſt her. This is diſputable.

A woman cannot hope to have the thirds of her huſband's land, which he mortgaged before marriage, till the money's paid, and the mortgage be cancelled.

A man and wife are joint purchaſers of land, to them and their heirs and the ſurvivors, and heirs; and if the husband dies, the wife may ſell the land without the conſent of their children

A woman that kills her husband is to be burnt alive.

If a wife brings forth a child, begotten by another before marriage, but born after marriage, the husband muſt own the child as heir at law.

A wife cannot be a witneſs for, or againſt her huſband, they two being but one in law.

If a wife brings forth a child during her husband's long abſence, though it be ſome years, yet if he lived all the time within this iſland, he muſt father that child; and if that child be her firſt born ſon, he ſhall inherit the

husband's eſtate, if intailed, or left without a will. This has been lately tried and decided otherwiſe.

A woman that doth not hear of her husband for ſeven years together may marry another man.

If a woman have no ſons, but daughters, the lands, as well as goods, are equally divided among the daughters; who are co heirs.

Man and wife are ſo faſt joined by our law, that they may not be wholly parted by our law, by any agreement between themſelves: but only by the ſentence of a proper judge, for adultery, *&c.*

Of Children, Sons and Daughters.

A Father may give all his eſtate (not intailed) to any one child, the conſideration of which keeps ſome children in awe.

A ſon at the age of 14, may chuſe his guardian, be an executor, may conſent to marriage (if not an apprentice) may, by will, give his goods and chattles, and become bound in bonds, or covenants for neceſſaries, food, raiment, ſchooling, *&c*

At the age of 15, he may be ſworn to his allegiance to the king.

At 21, he is ſaid to be of full age, may ſell land, (which in other countries is not till 25) when the heat of youth is ſomewhat abated, and they begin to be ſtayed in mind, as well as in growth.

A daughter at ſeven years may conſent to marry, tho' ſhe may afterwards diſſent; at nine ſhe may conſent to a jointure.

At 12, ſhe is able to confirm her former conſent to marriage, and if at that age ſhe diſſent not, ſhe is bound: ſhe may at that age make a will of her goods, and become bound for neceſſaries, *&c.*

At 13 ſhe may receive her lands into her own hands, that are given, or fall to her. At 21 ſhe may let, ſell, or will her lands.

The eldeſt ſon inherits all his father's lands (if the father died without a will) and to the younger children are diſpoſed goods and chattles, and commonly the eldeſt ſon's wife's portion.

If a man marry a wife having free land, and ſhe dieth, leaving a child that is heard to cry, tho' it dieth preſently, the man ſhall have the lands for his life. This is called, The courteſy of England.

Of Servants.

ORdinary ſervants are hired commonly for a year (whereby they become inhabitants of that pariſh) at the end whereof they may be free (giving 3 months warning before) and may place themſelves with other maſters; only it is accounted diſcourteous and unfriendly, to take another man's ſervant, before leave given by his maſter; and indiſcreet to hire a ſervant without a certificate of his diligence and faithfulneſs, in the ſervice of his laſt maſter, or ſomewhat to his effect.

Memorandum, That I, G. D. do certify, that J. B. the bearer hereof, hath been an honeſt and faithful ſervant unto me. Witneſs my hand, the 4th of May, 1762.

Forms of Receipts, Notes, and Bills, &c. neceſſary to be underſtood in order to forming the man of buſineſs.

Various forms of acquittances, when an apprentice, or ſervant receives money for the uſe of his maſter, or employer, &c.

REceived the 27th of July, 1762. of Mr Thomas Adams, Nine pounds twelve ſhillings, for my maſter David Stone, on accompt,

Per James Thompſon.

L. 9 12 —

Received the 6th of September, 1762. of Henry Holland, Fifty eight pounds ten ſhillings and four pence, in full payment for my maſter Andrew Jones,

Per Matthew Burns.

L. 58 10 4.

Received the 24th of Auguſt, 1762. of Mr James Johnſon and company, Two hundred pounds, for Mr George Bedford and partners,

Per Richard Simpſon.

L. 200—

Received the 22d of February 1762. of the honourable the united Eaſt India company, Four thouſand pounds ſixteen ſhillings and ſixpence, for Mr Engliſh and company,

Per Peter Spinks.

L 4000 16 6

Received the 26th of April, 1762. of the governor and company of the bank of England, Ten thouſand fifty pounds eighteen ſhillings, for Thomas Caxton and company,

Per Edward Carter.

L 10,050 18—

Received the 26th of June, 1762. of the worſhipful company of mercers, Eighty ſix pounds for my father Chriſtopher Yates,

Per Edward Yates.

L 86——

Received the 24th of April, 1762. of Mr Richard Foxcraft, Fifteen pounds, for a quarter's rent due at Chriſtmas laſt, for my maſter George Gibbons,

Per Iſaac Jobſon.

L 15——

Received the 14th of July, 1762. of Mr Lewis Armſtrong, Thirty-five pounds eight ſhillings, in part of a bill of One hundred pounds, payable to Mr Simon Pure or order, due the 10th inſtant,

Per Thomas Scot.

L. 35 — —

Received the 29th of February. 1762. of Mr Thomas Laurence, by order of Mr John Kent, the ſum of One hundred and fifty pounds ſix ſhillings and ten pence, on account of Mr Nathaniel Combs, of Appleby: I ſay received for my maſters George Pye and partners,

Per Iſaac Taylor.

L. 150 06 10

Forms of Acquittances, upon receipt of money, by maſters and men of buſineſs themſelves.

REceived the 16th of June, 1762. of Meſſrs Thomas and George Simplons, Six hundred and forty pounds on accompt,

Per William Burnet.

L. 640— —

Received the 4th of September, 1762. of the honourable William Parrot, Eſq; the ſum of Three hundred and fifty pounds, in full of all demands for ſelf and company,

Per George Dawſon.

L. 350 — —

Received the 17th of Auguſt, 1762. of Mr James Sims, Thirty pounds in full for intereſt of twelve hundred pounds, due at Midſummer laſt,

Per Thomas Lowther.

L. 30 — —

Received the 19th of September, 1762. by the order and for the uſe of Mr Benjamin Blundell, of Mr Stephen Carr, Ten pounds ten ſhillings, and allowed for taxes and repairs, one pound ten, together, the ſum of twelve pounds, in full for a quarter's rent, due at Midſummer laſt,

Per Joſeph Rentroll.

L. 12 — —

Received the 23d of June, 1762. of the executors of James late earl of Bath, by the hands of Mr John Thomſon, the ſum of Sixty five pounds twelve ſhillings, in full for my half year's annuity due at Lady-day laſt

Per Charles Stewards

L. 65 — —

Received the 1ſt of June, 1762. of Robert Pringle, Eſq; and the other owners of the ſhip Berwick, the ſum of one hundred and eight pounds ten ſhillings, in full for cordage, tackle, and trimming, furniſhed the ſaid ſhip,

Per Andrew Shipwright.

L. 108 — —

Promiſſory Notes by Banker's Apprentices and Servants.

Briſtol, September 7th, 1762.

I Promiſe to pay the honourable Charles Snell, Eſq; or bearer, on demand, Fifty pounds,

For Sir Richard Jones and partners,

Per Anthony Timons.

L. 50 — —

London, November 20th, 1762.

I promiſe to pay the royal African company or bearer, on demand, Four thouſand ſix hundred and ſixty four pounds thirteen ſhillings and ſixpence, for my maſters George and James,

Per Adam Eve.

L 4664 13 06

Promiſſory Notes for a man's ſelf, &c.

I Promiſe to pay to Nathaniel Smith, or bearer, on demand, Nine hundred pounds, June 2d, 1762.

Per Thomas Hunt.

L. 900 ——

I promiſe to pay to the governor and company of the bank of England, Ten thouſand pounds, value received this 6th of June, 1762. for myſelf and partners,

Per Iſrael Jack.

L. 10,000 —

London, Auguſt 2d, 1762.

I promiſe to pay Mr Daniel Pope, Caſhier of his majeſty's revenue of exciſe, or order, forty days after date, Five hundred and thirty pounds, value received,

Per Andrew Caſh.

L. 530 — —

I promiſe to pay to Peter Paul, Eſq; or order, on demand Four hundred and ninety pounds, value received this 9th of April, 1762.

Per Peter Vernon.

L 490 ——

I promiſe to pay to Francis Dove, Eſq; or order the ſum of ſixty pounds, on demand after the receipt of a bill of exchange drawn the 9th current, by George Trade, on Henry Henly of Northampton, mercer, for the like

ſum payable to William Pack, Eſq; or order, which the ſaid Frances Dove has indorſed to me, this 25th of December, 1762.

Per James George.

L. 60 — —

A Bill of Debt.

KNOW all men by theſe preſents, That I Michael Pool of the county of Durham, gent. do own and acknowledge myſelf juſtly to ſtand indebted to Alexander Anderſon of the county of York, haberdaſher, the juſt ſum of twenty four pounds, of good and lawful money of Great Britain, and which I do hereby promiſe to pay unto him the ſaid Alexander Anderſon, on the 6th day of April, next enſuing the date hereof. Witneſs my hand this 12th day of September, in the year of our Lord 1762.

Michael Pool.

Another.

MEmorandum, That I Thomas Bell, of the pariſh of St Ambroſe, ſalter, do owe and am indebted to James Purves of the ſaid place, mercer, the ſum of Sixty pounds of good and lawful money of Great Britain, which ſum I promiſe to pay to the ſaid James Purves, his executors, adminiſtrators, or aſſigns, on or before the 23d day of October next. In witneſs whereof I have hereunto ſet my hand and ſeal, the 27th day of June, in the year of our Lord 1762.

Thomas Bell. (L. S.)

Signed, ſealed, and delivered,
(being firſt legally ſtamped)
in preſence of John Thompſon.
Michael Wentworth.

A promiſſory note, mentioning order, is indorſeable from one perſon to another, which is done by the preſent poſſeſſor's writing his name on the back of it, and delivering it up to the party, to whom he intends to aſſign over his property therein.

The delivering up a promiſſory note to the perſon who ſigned it, is a ſufficient voucher of it's being paid, nor is there need for writing a receipt thereon.

Promiſſory notes, and book debts, if not legally demanded in the ſpace of ſix years, cannot be recovered by law, upon the debtor's pleading the ſtatute, but they are recoverable in chancery.

If you keep a promiſſory note on demand, in your own hands above three days, and the perſon it is upon ſhould fail, the loſs will be your own; but if he fail within three days, it will light in equity on the perſon that paid it you.

Promiſſory Notes.

BOrrowed and received of John Derby, Eſq; Seventy pounds, which I promiſe to pay to him, or order, on demand. Witneſs my hand this 29th of September, 1762.

Per Joſeph Jones.

L. 70 0 0

Borrowed and received of Mr Timothy Truſty, Thirty pounds, which I promiſe to pay to him, or order, three months after date. Witneſs my hand this 14th of Auguſt, 1762.

Per Roger Dods.

L. 30 0 0

I promiſe to pay to James Forreſter, Eſq; or order, Two hundred p..nds eighteen ſhillings, on demand, value received. Witneſs my hand this 17th day of July, 1762.

Per. Roger Cook.

L. 200 18 0

N. B. Obſerve in promiſſory Notes, that the value received is mentioned, or they are of no force.

ARITHMETIC:

AFter you are compleat in writing, you next proceed to arithmetic, the knowledge of which is ſo neceſſary, that ſcarce any thing in life, and nothing in trade can be done without it.

And firſt of notation and numeration.

In notation we muſt obſerve that all numbers may be, and now generally are expreſſed by, or compoſed of the ten figures or characters following, viz.

One, two, three, four, five, ſix, ſeven, eight, nine, cypher
1 2 3 4 5 6 7 8 9 0

Nine of theſe are called ſignificant figures, to diſtinguiſh them from the cypher, which itſelf ſignifies nothing; but as it is placed (in whole numbers) ſerves to increaſe the value of the next figure or figures that ſtand before it; as 3 is but three; but before the cypher thus, 30, the 3 becomes thirty, &c.——We are to note, that every one, or any of the above nine figures or digits have two values, one certain, and another uncertain: the certain value is, when it ſtands alone by itſelf: the uncertain is, when joined or placed with other figures or cyphers: for when any one of theſe figures ſtands alone, it ſignifies no more than its own ſimple value: as 5 is but five, 4 but four, 6 is but ſix, and 3 no more than three, *&c.* And this is the certain value of a figure: but when another figure or cypher is annexed, then they are increaſed in their value ten times: as 5, or five units, or ones, to five tens or fifty, 4 to 4 tens or forty, 6 to 6 tens, or ſixty, and 3 to 3 tens or thirty, as thus, 51, fifty-one: 42, forty-two: 63 ſixty-three: 34, thirty four, *&c.* Again, if any of the

ſaid figures ſtand in the third place towards the left hand they then ſignify ſo many hundreds, as ſingly they expreſs units or ones, as 500 is five hundreds, 400 four hundreds, 600 ſix hundreds, and 300 three hundreds, &c. If any of them poſſeſs the fourth place towards the left hand, they are ſo many thouſands as they contain units: and ſo any, or every figure increaſes by a tenfold proportion, from the right hand to the left, according to the place it is found or ſtands in; ſo that 5 may be but five, or fifty; five hundred, or five thouſand; in the firſt place, 5; in the ſecond, 50; in the third, 500; and in the fourth place, 5000, &c.

The Numeration Table.

12	11	10	9	8	7	6	5	4	3	2	1
Hundreds of thouſands of millions	Tens of thouſands of millions	Thouſands of millions	Hundreds of millions	Tens of millions	Millions	Hundreds of thouſands	Tens of thouſands	Thouſands	Hundreds	Tens	Units
1	2	3	4	5	6	7	8	9	0	1	2
	1	2	3	4	5	6	7	8	9	0	1
		1	2	3	4	5	6	7	8	9	0
			1	2	3	4	5	6	7	8	9
				1	2	3	4	5	6	7	8
					1	2	3	4	5	6	7
						1	2	3	4	5	6
							1	2	3	4	5
								1	2	3	4
									1	2	3
										1	2
											1

7	6	5	4	3	2	1
Thouſands of millions	Millions	Thouſands	Units, or ones			
123	456	789	012			
12	345	678	901			
1	234	567	890			
	123	456	789			
	12	345	678			
	1	234	567			
		123	456			
		12	345			
		1	234			
			123			
			12			
			1			

For the eaſier reading of any number, firſt get the words at the head of the table by heart; as units, tens, hundreds, thouſands, &c. and applied thus, 75, five units, five, and 7 tens, ſeventy, that is, ſeventy five. Again, 678; 8 units, eight. 7 tens, ſeventy: and 6 hundred, ſix hundreds, that is, ſix hundred ſeventy eight. Once more, 3466: 6 units, ſix; 5 tens, fifty; 4 hundred, four hundred; 3 thouſand, three thouſand; together three thouſand four hundred ſixty ſix. Read the 4th line of the table downwards, viz. 123456789; here the valuation of the figures is from the right hand to the left, as 1 in the ninth place is hundreds of millions, but to be read from the left hand to the right; thus, one hundred twenty three millions, four hundred fifty ſix thouſand, ſeven hundred eighty nine. But any number may yet be read more intelligibly, viz. by ſtops, thus; make a comma at every third figure or cypher, beginning at the right hand, and ſo on towards the left, making a ſtop after every third figure or cypher, as aforeſaid, thereby diſtinguiſhing every third place into hundreds, as hundreds of units, hundreds of thouſands, hundreds of millions, and hundred thouſands of millions, &c. and for tryal let's read the firſt line of the table; the laſt place in valuation is hundred thouſands of millions, and to be pointed into periods thus, 123,456,789,012; and read thus, one hundred twenty three thouſand, four hundred fifty ſix millions, ſeven hundred eighty nine thouſand twelve: that is no hundreds, but twelve. Again, read the following number, viz. 276,245,678,921,460; here the firſt point or period is betwixt 4 and 1, and the laſt betwixt 2 and 6, and to be read thus; 276 millions of millions, 245 thouſands of millions, 678 millions, 921 thouſands, 460 units or ones. And thus may any number be read with eaſe, tho' a large one; and thus are large numbers or ſums expreſſed, or ſet out in the exchequer, bank and lottery tickets, &c. as thus, No. 225,156——19,578——and 42,800, &c. the foregoing table, of numeration is on the right hand diſtanced out into periods, for the eaſier reading thereof.

Numbers to be read and written.

96, Ninty ſix
242, Two hundred forty two
7924, Seven thouſand nine hundred 24
54006, Fifty four thouſand and ſix
524207, Five hundred twenty four thouſand 207
4606240, Four millions 606 thouſand 240
62700472, Sixty two millions 700 thouſand 472
474960204, Four hun 74 millions 960 thouſ. 204
4214007042, Four thouſ. 214 millions 7 thouſ. 42
47070642042, Four hundred and 70 thouſand, 706 millions 420 thouſand and 42.

Of numerical letters.

Sometimes numbers are expreſſed by letters; eſpecially in the bible, to ſignify the chapter or pſalm; at the bottom of title pages of books for the date of the year, and frequently in inſcriptions of funeral monuments, &c. for which reaſon 'tis neceſſary to know how to read them. Therefore obſerve, that I. ſtands for 1, or one unit. II. for 2. III. for 3 IV. for 4 V. for 5. VI. for 6. VII. for 7. VIII. for 8 IX. for 9. X. for 10. XI. for 11. XII. for 12. XIII. for 13. XIV. for 14. XV. for 15. XVI. for 16. XVII. for 17. XVIII. for 18. XIX. for 19. XX. for 20. XXI. for 21. &c. XXX. for 30. XXXI. for 31. &c. XL for 40 XLV. for 45. &c. L. for 50. LI. for 51. &c. LX. for 60. LXI. for 61. &c. LXX. for 70. LXXI. for 71. &c. LXXX. for 80. LXXXI. for 81. &c. XC for 90. XCI. for 91. &c. C. for 100. CC. for 200. CCC for 300. CCCC for 400. D. or. ID. for 500. DC for 600. &c. M or CID. for 1000. &c. Thus the preſent year 1762. is wrote MDCCLXII.

ADDITION,

IS the putting together two or more numbers or ſums in order to make them one total, or whole ſum.

Here we muſt always obſerve to ſet the numbers to be added, orderly one under the other: that is, units under, units, tens, under tens, hundreds under hundreds, &c. as in the ſubſequent examples.

Addition of numbers of one denomination.

Yards			Gallons			Pounds					
	Tens	Units		Hund.	Tens	Units	X of Th.	Thous.	Hund.	Tens	Units
	2	4		7	5	6	5	7	7	6	2
	4	6		5	3	2	3	9	9	4	4
	6	8		4	7	8	6	7	2	2	2
	8	2		6	9	6	7	9	6	7	4
	2	4		4	2	2	0	2	4	6	2
	4	2		6	7	8	0	0	3	9	0
	2	8	6		3	5	6	2	2	4	7	4	8	4

In addition of ſimple numbers, whether it be yards, gallons, pounds, or any thing elſe, remember to carry 1 for every 10 you find in the row or rank of figures being units, to the next row of tens; and the like from the rank of tens to the row of hundreds. &c. and whatever it makes in the laſt, you muſt ſet it down, amount to what it will. Thus:

The numbers above are ſet down in order, as before directed; that is, units under units, tens under tens, &c. as may be plainly underſtood, by being indicated at the head of each row or rank with units, tens, hundreds, &c. Then in caſting up each example to know its total, I begin at the right hand, or unit rank, of the firſt example, and ſay 2 and 4 is 6, and 2 is 8, and 8 is 16, and 6 is 22, and four is 26; in which row there are two tens and 6 over; wherefore I ſet down 6 juſt under its own rank, and carry 2 to the next or laſt row, and ſay, 2 that I carried and 4 makes 6, and 2 is 8, and 8 is 16, and 6 is 22, and 4 is 26, and 2 is 28: and it being the laſt row, I ſet down the amount viz. 28; ſo that the total number of yards is found to be (by the method) at the bottom 286. And the next, or ſecond example, is found by the ſame method to be 3562 gallons. And in the third and laſt example, the total number of pounds is found to be 247484. and ſo the total of any other example of the ſame kind, viz. ſimple numbers of one denomination, may be found. Note, that when any of the ranks amount to juſt 10, 20, 30, 40, 50, &c. the

you may ſet down the o, under its proper rank, and carry either 1, 2. 3. 4, or 5, according to the number of tens that you find, to the next row; and ſo you muſt always do, when it ſo happens, whether in the firſt, ſecond or third row, or in any other except the laſt, where what it amounts to muſt be ſet down without any reſerve or carriage in the mind, becauſe there is no other row or rank to carry to, as was hinted before.

Addition of Mixt Numbers.

Obſerve, 4 farthings make 1 penny, 12 pence make 1 ſhilling, 20 ſhillings make 1 pound ſterling,

Libra in Latin ſignifying a pound, *l.* therefore ſtands for pounds.

Solidus in Latin ſignifying a ſhilling, *s.* therefore ſtands for ſhillings.

Denarius in Latin ſignifying a penny, *d.* therefore ſtands for pence

Quadrans in Latin, ſignifying a farthing. *q.* therefore ſtands for farthings.

Obſerve, that pounds be ſet directly under pounds, ſhillings under ſhillings, pence under pence, and farthings under farthings.

But before you proceed, get this table of pence by heart, thus, 30*d.* is half a-crown, then 60*d.* is 5*s.* again 40*d.* is 3*s.* 4*d.* then 80*d.* is 6*s.* 8*d.* again 50*d.* is 4*s.* 2*d.* then 100*d.* is 8*s* 4*d.* &c. 100lb of cheeſe at 3*d.* the lb. comes to three times 8*s.* 4*d.* or 100 faggots, 120 to the hundred, at 1*d.* a piece, comes to 10*s.* in the table.

d.		*s.*	*d.*
20		1	8
30		2	6
40		3	4
50		4	2
60		5	0
70	is	5	10
80		6	8
90		7	6
100		8	4
110		9	2
120		10	0

s.		*l.*	*s.*
30		1	10
40		2	00
50		2	10
60		3	00
70		3	10
80	is	4	00
90		4	10
100		5	00
110		5	10
120		6	00
130		6	10

Then for every crown that an hundred of faggots coſt reckon an half-penny; if the faggot coſts me three halfpence, one hundred will coſt 15*s.* becauſe there is three crowns in it.

Note, That young men may improve themſelves very much in reckoning up divers things after they have by heart the table aforeſaid, and learning this rule of addition.

An hundred yards of tape at one penny the yard, the table tells you comes to 8*s.* 4*d.*

An hundred yards of ferreting at one penny halfpenny the yard.

In the table 100*d.* is - - - -	8*s.*	4*d.*
And half the ſum is - - - -	4*s.*	2*d.*
Anſwer	12*s.*	6*d.*

If one pound of any thing coſts 7*d.* halfpenny, what will 280 lb weight coſt after that rate; performed by addition thus,

	l.	*s.*	*d.*
200 ſixpences makes 100*s.* - - - -	5	—	-
80 ſixpences make - - - - -	2	—	-
200 pence - - - - - -		16	8
80 pence is a noble, or - - -		6	8
200 half pence is 100 pence, or - -		8	4
80 halfpence make 10 groats, or - -		3	4
Price of the goods	8	15	0

Note, Now you have by heart the table of pence, you may caſt up any ſum of money without dotting, for when you know the number of pence, you may by this table, know how many ſhillings to carry to the ſhillings place, and for the number of ſhillings in the row of ſhillings you know that 70*s.* is 3*l* 10.

(10)	(20)	(12)
l.	*s.*	*d.*
18	16.	1
20	11	7
23	18	9
33	17	10
136	4	3

12 ſet over the pence, ſhews that for every 12 I find in the pence row I am to carry 1 to the ſhillings; for ſo many 20*s.* as I find in the ſhillings row, 1 to the place of pounds as aforeſaid.

But the eaſieſt way of caſting up this ſum (for the young learner) is by uſing dots, thus:

Beginning at the pence; I ſay 10*d*, and 9*d*. is 19*d*. where againſt the 9 I ſet a dot for 12*d*. (or you may make your dots on waſte paper) and what is more or above 12 I carry to the next figure, viz 7, and it makes 14, where I ſet a dot alſo for 12 and carry the remaining 2 to the 1 on the top, which makes 3 which 3*d*. I ſet between the lines, as you ſee in the example.

Next, I look how many dots there are, and find 2, which I carry to the row of ſhillings, ſaying, 2 that I carry and 17 is 19, and 18 is 37 where againſt the 18 I ſet a dot for 20*s* or 1*l*. and carry the odd 17*s*. upwards ſaying. 17*s*. I carry and 11 is 28, where I ſet a dot againſt the 11 for another 20s and carry the remaining 8 to the 16 on the top, ſaying 8 I carry and 16 makes 24*s*. where I ſet down a dot for 20*s*. and ſet between the lines the remaining 4*s*. under the row of ſhillings,

Note, That you may ſum up the ſhillings row without dotting, thus; ſaying, 2*s*. that I carry from the place of pence, and 7 is 9, and 8 is 17, and 1 is 18, and 6 is 24, and 10 is 34, and 10 is 44, and 10 is 54, and 10 is 64, that is 3*l* 4*s*. then the 4*s* being ſet between the lines, the 2*l* is to be carried to the pounds.

Laſtly, The 3 dots for the 3*l* found in the place of ſhillings I carry to the pounds, ſaying, 3 that I carry and 3 is 6, and 3 is 9. and 7 on the top makes 16, the remaining 6 I ſet between the lines, under the firſt row of the pounds, and I carry 1 to the laſt row, ſaying, 1 that I carry, and 7 is 8, and 2 is 10, and 2 is 12, and 1 is 13, which being ſet between the lines, the whole ſum comes to 136*l*. 4*s*. 3*d*.

Note, That when you are to write a bill of ſeveral ſmall parcels, begin it in order of pounds, ſhillings, and pence, ⊖ 2 9, and when you are to ſet down 16*d*. ſet down 1*s*. 4*d*. or to ſet down 23*s*. you muſt ſet 1*l*. 3*s*. 0*d*.

If a man owes me the three following ſums of money, what come they to in the whole?

l.	s.	d.
202.	17.	7½
703	1	9
906	10	1¾
1812	9	5¾

Note, that the 7½d. is seven pence halfpenny; and 1¾d. is one penny farthing; and in the total sum between the lines 5¾d. is five pence three farthings.

To cast up the three sums I do thus, the ¾ which is the farthing, and the ½ the halfpenny, make ¾ or three farthings, which is set between the lines; next 1d. and 9d. is 10d. and 7d is 17d. where against the 7 is set a dot for 12d. and set the odd 5d bewteen the lines.

Next, I that I carry from the place of pence and 10s. is 11. and 1 is 12. and 17 is 29s. I set down the remaining 9s. between the lines, and the 20s. making 1l. I carry to the place of pounds;

Saying, 1 that I carry and 6 is 7, and 3 is 10, and 2 is 12, where I set a dot for 10, and set the remaining 2 between the lines.

Next, I carry the dot for ten, as 1 to the middle row (being all cyphers) and proceed to the last row;

Saying, 9 and 7 is 16 and 2 at the top is 18, which I set between the lines, and the whole sum comes to £812l 9s 5¾.

Addition of Money.

Money owing and money received, as follows.

(1)

Owing to

	l.	s.	d.
Mr—	4	12	6
Mr—	7	06	9
Mr—	4	12	0
Mr—	6	17	7
Mr—	5	06	6
Mr—	4	12	3
Mr—	6	00	0
Mr—	5	13	4
	45	02	11

(2)

Received from

	l.	s.	d.
Mr—	46	10	9
Mr—	79	16	0
Mr—	42	18	3
Mr—	66	12	4
Mr—	90	16	0
Mr—	84	17	6
Mr—	24	12	0
Mr—	60	10	0
	490	12	10

I begin and ſay, 4 and 3 is 7, and 6 is 13, and 7 is 20 and 9 is 29, and 6 makes 35*d* now 35*d*. according to the table, is 2*s*. 6*d*. and 5*d* makes 2*s*. 11*d* I ſet down 11 exactly under the rank of pence, and ſay, 2*s*. that I carry (which I do to the rank of ſhillings) and 5 is 7, and 2 is 9 (for I only take the unit rank of ſhillings) and 6 is 15. and 7 makes 22. and 2 is 24, and 6 is 30, and 2 makes 32; and now being come to the top of the ſum, and it making 32, I come down with the tens of ſhillings, ſaying 32, and 10 is 42, and 10 is 52, and 10 is 62. and ten is 72, and ten makes 82*s*. and the table telling me that 80*s* is 4*l*. I know therefore 82*s*. is 4*l* 2. wherefore I ſet down the remaining 2*s*. juſt under the row of ſhillings, and carry 4*l*. to the pounds, ſaying, 4 that I carry, and 5 is 9, and 6 is 15, and 4 is 19, and 5 is 24, and 6 is 30. and 4 is 34. and 7 is 41, and 4 is 45*l*. ſo that the total of theſe ſeveral ſums of money due to thoſe ſeveral perſons, amounts to 45*l*. 2*s*. 11*d*. as in the example.

In the ſecond example of money received, I begin at the right hand and ſay 6 and 4 is 10, and 3 is 13 and 9 makes 22, and 22*d*. being 1*s*. 10*d*. I ſet down 10, and carry one to the ſhillings, ſaying, 1 that I carry and 2 is 3, and 7 is 10, and 6 is 16, and 2 is 18, and 8 is 26 and 6 makes 32; then I come down with the tens, ſaying, 32 and 10 makes 42, &c. and I find at the bottom it comes to 112*s*. which making 5*l*. 12*s* I ſet down 12*s* and carry 5*l*. to the pounds, ſaying, 5 that I carry and 4 is 9, &c. I find at the top it amounts to 36, wherefore I ſet down 6 exactly under its own rank, viz. the rank of units of pounds, and carry 3 for the tens that are in 30 (for at all times in the firſt denomination of addition, whether of money, weight, or meaſure; that is in the denomination of pounds, tens or yards, you muſt caſt them up as ſums of one denomination; that is, for every ten carrying 1 to the next, &c.) ſaying, 3 that I carry, and 6 is 9, and 2 is 11, and 8 is 19. &c. and I find then at the top it comes to 49; wherefore I ſet down 49 before the 6, and the total amounts to 496*l*. 12*s*. 10*d*.

A Table of Engliſh Coins.

Of Gold.

		l.	s.	d.
A Jacobus.	Value	1	5	0
A Carolus,		1	3	0
A Guinea,		1	1	0
A half Guinea,		0	10	6

Of Silver.

		l.	s.	d.
A Crown,	Value	0	5	0
A half Crown,		0	2	6

The names of the reſt ſpeak their value, as a ſhilling, a ſixpence, a groat, or 4d. a threepence, a twopence, a penny.

Of Copper,

A Halfpenny, A Farthing.

Beſides the above mentioned, we have ſtill in uſe the names of ſome other pieces, which are now but imaginary, viz.

		l.	s.	d.
A Mark,	Value	0	13	4
An Angel,		0	10	0
A Noble,		0	6	8

Of Troy weight.

The leaſt fraction or denomination of weight uſed in England, is a grain of wheat gathered out of the middle of the ear, and well dried; from whence are produced thoſe following tables of weight, called Troy weight.

32 Grains of wheat	make	1 Artificial grain
24 Artificial grains		1 Penny weight
20 Penny weight		1 Ounce
12 Ounces		1 Pound.

And therefore,

lb.	oz.	pw.	grains.
1	12	20	24
1	22	240	5760
	1	20	480
		1	24

Troy weight ſerveth to weigh bread, gold, ſilver and electuaries. It regulateth and preſcribeth a form how to keep the money of England at a certain ſtandard. The goldſmiths have divided the ounce troy weight into other parts, which they generally call mark weight The denominative parts thereof are as followeth, viz. a mark (being an ounce troy) is divided into 24 equal parts, called carects, and each caret into 4 grains; ſo that in a mark are 96 grains. By this weight they diſtinguiſh the different fineneſs of their gold; or if to 22 carects of gold be put 2 carects of alloy (which is of ſilver, copper, or other baſer metal, with which they uſe to mix their gold or ſilver to abate the fineneſs thereof) both making when mixed but an ounce or 24 carects, then this gold is ſaid to be 22 carects fine; for if it come to be refined, the 2 carects of alloy will fly away, and leave only 22 carects of pure gold: the like to be conſidered of a greater or leſſer quantity. And as the fineneſs of the gold is eſtimated by carects, ſo the fineneſs of ſilver is diſtinguiſhed by ounces; for if a pound of it be pure, and loſeth nothing in refining, ſuch ſilver is ſaid to be 12 ounces fine; but if it loſeth any thing, it is ſaid to contain ſo much fineneſs as the loſs wanteth of 12 ounces; as if it loſt 1 ounce 14 penny weight, then it is ſaid to be 10 ounces 6 penny weight fine, and that which loſeth 2 ounces 4 penny weight 16 grains, is ſaid to be 9 ounces 15 penny weight 8 grains fine, &c. the like to be underſtood of a greater or leſs quantity:

Of apothecaries weight.

The apothecaries have their weights deduced from troy weight, a pound of troy being the greateſt integer; a table of whoſe diviſion and ſubdiviſion followeth, viz.

And therefore,

			lb.	oz.	dr	gr.
12 Ounces		1 Pound	1	12	8	3 — 20
8 Drams	make	1 Ounce				
3 Scruples		1 Dram	1	12	96	288 — 5760
20 Grains		1 Scruple		1	8	24 — 480
					1	3 — 60
						1 — 20

Thus much concerning troy weight, and its derivative weights, which, as was said before, serveth to weigh bread, gold, silver, and electuaries. Now, besides troy weight, there is another kind of weight used in England, commonly known by the name of avoirdupois weight (7 pound of which is equal to 14 ounces, 12 penny weight troy weight): and it serveth to weigh all kind of grocery wares, also butter, cheese, flesh, wax, tallow, rosin, pitch, lead, and all such kind of garble; the table of which weight is as followeth.

			Fun.	C.	qrs.	lb.	oz.	dr.	qrs.
4 Quarters of a dram		1 Dram	1	20	4	28	16	16	4
16 Drams		1 Ounce							
16 Ounces	make	1 Pound		1	4	112	1792	28672	114688
28 pounds		1 Quarter of a hundred			1	28	448	7168	28672
4 Quarters		1 Hund. wt. or 112 lb.				1	16	256	1024
20 Hundred		1 Tun					1	16	64
								1	4

Wool is weighed with this weight, but only the divisions are not the same, a table whereof followeth.

A Table of the denominative parts of wool weight.

7 Pounds			1 Clove
2 Cloves			1 Stone
2 Stones	}	make	1 Todd
6 Todd 1 ſtone			1 Wey
2 Weys			1 Sack
12 Sacks			1 Laſt

Laſt.	ſack.	wey.	todd.	ſtone.	clove.	lb.
1	12	2	½	2	2	7
1	12	24	156	312	624	4368
	1	2	13	26	52	363
		1	6½	13	26	182
			1	2	4	28
				1	2	14
					1	7

Note, that in ſome counties the wey is 156lb. avoirdupois, as the Suffolk wey; but in Eſſex, there is 336 lb. in a wey.

The leaſt denominative part of liquid meaſure is a pint, which was formerly taken from troy weight (1 pound of wheat, troy weight, making a pint of liquid meaſure); but in regard of the difference between the brewers and farmers of his majeſty's excile, concerning the gauging of veſſels, occaſioned by the different opinions of artiſts concerning the ſolid inches in a gallon, it was lately decided by act of parliament; the ſtatute now making 282 ſolid inches in a beer gallon, and 231 in a wine gallon; and conſequently the pint beer meaſure to contain $35\frac{3}{4}$ ſolid inches, and the pint wine meaſure to contain $28\frac{7}{8}$ cubical or ſolid inches. From whence is drawn the following table.

A table of liquid measure.

35 1/2 Cubical inches		make	1 Pint beer measure
28 7/8 Cubical inches			1 Pint wine measure
2 Pints			1 Quart
2 Quarts			1 Pottle
2 Pottles			1 Gallon
8 Gallons			1 Firkin of ale, soap, or herring
9 Gallons	}		1 Firkin of beer
10 Gallons and a half			1 Firk. of salmon or eels
2 Firkins			1 Kilderkin
2 Kilderkins			1 Barrel
42 Gallons			1 Tierce of wine
63 Gallons			1 Hogshead
2 Hogsheads			1 Pipe or butt
2 Pipes or butts	J		1 Tun of wine

And therefore,

Tuns.	pipes.	hhds.	gall.	pints
1	2	2	63	8
1	2	4	252	2016
	1	2	126	1008
		1	63	504
			1	8

The least denominative part of dry measure is also a pint, and this is likewise taken from troy weight: the table of whose division followeth.

The table of dry measure.

1 Pound troy		make	1 Pint
2 Pints			1 Quart
2 Quarts			1 Pottle
2 Pottles			1 Gallon
2 Gallons			1 Peck
4 Pecks	}		1 Bushel
4 Bushels			1 Comb
2 Combs			1 Quarter
4 Quarters			1 Chaldron
5 Quarters			1 Wey
2 Weys	J		1 Last

And therefore,

Last.	wey.	qrs.	com.	buſ.	pecks.	gall.	pints.
1	2	5	2	4	4	2	8
1	2	10	20	80	320	640	5120
	1	5	10	40	160	320	2560
		1	2	8	32	64	512
			1	4	16	32	256
				1	4	8	64
					1	2	16
						1	8

The leaſt denominative of long meaſure is a barley corn well dried, and taken out of the middle of the ear; whoſe table of parts followeth.

3 Barely corns	make	1 Inch
12 Inches	make	1 Foot
3 Feet	make	1 Yard
3 Feet, 9 Inches, or a yard and a quarter	make	1 Ell Engliſh
6 Feet	make	1 Fathom
5 Yards and a half	make	1 Pole, perch or rood
40 Poles or perches	make	1 Furlong
8 Furlongs	make	1 Engliſh mile

And therefore,

Mile.	furl.	poles.	yards.	feet.	inches.	barley corns.
1	8	320	1760	5280	63360	190080
	1	40	220	660	7920	22760
		1	5½	16½	198	594
			1	3	36	108
				1	12	36
					1	3

☞ And note, that the yard, as well as the ell is uſually divided into 4 quarters, and each quarter into 4 nails.

Note alſo, that a geometrical pace is 5 feet, and there are 1056 ſuch paces in an Engliſh mile.

The parts of the ſuperficial meaſure of land, are ſuch as are mentioned in the following table, viz.

A table of land meaſure.

40 Square poles or perches	make	1 Rood or quarter of an acre
4 Roods	make	1 Acre

By the foregoing table of long meaſure, you are informed what a pole, or, which is all one, a perch, is; and by this, that 40 ſquare perches is a rood. Now, a ſquare perch is a ſuperficies very aply reſembled by a ſquare trencher, every ſide thereof being a perch of 5½ yards in length, 40 of them is a rood, and 4 roods an acre; ſo that a ſuperficies that is 40 perches long and 4 broad is an acre of land, the acre containing in all 160 ſquare perches.

The leaſt denominative part of time is 1 minute, the greateſt integer being 1 year, from whence is produced this following table.

Table of time.

60 Minutes	make	1 Hour
24 Hours	make	1 Day natural
7 Days	make	1 Week
4 Weeks	make	1 Month
13 Months, 1 day, 6 hours	make	1 Year

But the year is uſually divided into 12 unequal kalendar months; whoſe names, and the number of days they contain follow, viz.

	Days
January	31
February	28
March	31
April	30
May	31
June	30
July	31
Auguſt	31
September	30
October	31
November	30
December	31
	365

So that the year containeth 365 days and 6 hours, but the hours are not reckoned, but only every 4th year, and then there is a day added to the latter end of February, and then it containeth, 29, days, and that year is called leap year, and containeth 366 days

And here note, that as the hour is divided into 60 minutes, ſo each minute is ſubdivided into 60 ſeconds, and each ſecond into 60 thirds, and each third into 60 fourths, &c.

The tropical year, by the exacteſt obſervations of the moſt accurate aſtronomers, is found to be 365 days, 5 hours, 49 minutes, 4 ſeconds, and 21 thirds.

The following example will make this rule plain to the learner. Thus theſe following ſums being given to be added, viz. 136*l.* 14*s.* 4*d.* 2*qrs.* and 79*l.* 7*s.* 10*d.* 3*qrs.* and 33*l.* 18*s.* 9*d.* 1*qr.* and alſo 15*l.* 9*s.* 5*d.* 0*qrs.* the numbers being diſpoſed according to order will ſtand as in the margin. Then begin at the denomination of farthings, and add them up; ſaying 1 and 3 are 4 and 2 makes 6. Now, I conſider that 6 farthings are 1 penny and 2 farthings; wherefore I ſet down the 2 farthings in its place under the line, and keep 1 in mind to be added to the next denomination of pence. Then I go on, ſaying, 1 that I carried and 5 are 6. and 9 are 15, and 10 are 25, and 4 are 29. Now I conſider, that 29 pence are 2 ſhillings and 5 pence; therefore I ſet the 5 pence in order under the line, and keep 2 in mind for 2 ſhillings, to be added to the ſhillings. Then I go on, ſaying, 2 that I carried and 9 are 11, and 18 are 29, and 7 are 36, and 13 are 49. Then I conſider that 40 ſhillings are 2 pounds and 9 ſhillings; wherefore I ſet the 9 ſhillings under the line, and carry 2 for the 2 pounds to the next and laſt denomination of pounds; and proceed, ſaying, 2 that I carry and 5 makes 7, and 3 are 10. and 9 are 19, and 6 are 25. Then I ſet down 5, and carry 2 for the 2 tens, and proceed ſaying, 2 that I carried and 1 is 3, and 3 are 6, and 7 are 13. and 3 makes 16. Then I ſet down 6, and carry 1 for the 10, and go on; ſaying, 1 that I carried and 1 are 2; which I ſet in its place under the line, and the work is finiſhed. And thus I find the ſum of the foreſaid numbers to be 265*l.* 9*s.* 5*d.* 2 *qrs.* This to the ingenious practitioner is ſufficient. But I ſhall for the further illuminating of the weaker apprehenſions,

	l.	*s.*	*d.*	*qrs*
	136	13	4	2
	79	7	10	3
	33	18	9	1
	15	9	5	0
	265	9	5	2

explain the operation of another example in troy weight. And here the learner muſt take notice of the table of troy weight mentioned before. The numbers given in this example are, 38 *lb.* 7 *oz.* 13 *pw.* 18 *gr.* and 50 *lb.* 10 *oz.* 10 *pw.* 12 *gr.* and 42 *lb.* 8 *oz.* 5 *pw.* 16 *gr.* And in order to the addition thereof, I place them as you ſee, and proceed to operation; ſaying, 16 and 12 are 28, and 18 are 46. Now, becauſe 24 grains make 1 penny weight, 46 grains are 1 penny weight, and 22 grains; wherefore I ſet down 22, and carry 1 for the penny weight: and going on, I ſay, 1 that I carry and 5 are 6, and 10 are 16, and 13 are 29; which is 1 ounce and 9 penny weight. I ſet down 9 in its place under the line, and carry one to the ounces; ſaying, 1 that I carry and 8 are 9, and 10 are 19, and 7 are 26. And becauſe 26 ounces make 2 pounds, 2 ounces, I ſet down 2 for the ounces, and carry 2 to the pounds, going on, 2 that I carry and 2 are 4, and 8 makes 12; that is 2 and go 1: then 1 I carry and 4 are 5, and 5 are 10, and 3 makes 13; which I ſet down as in the margin, and the work is finiſhed: and I find the ſum of the ſaid numbers to amount to 132 *lb.* 2 *oz* 9 *pw.* 22 *gr.* This is ſufficient for the underſtanding the following examples, or any other that ſhall come to thy view. The way of proving theſe, or any ſum in this rule, is ſhewed immediately after the enſuing examples.

lb.	*oz.*	*pw.*	*gr.*
38	7	13	18
50	10	10	12
42	8	5	16
132	2	9	22

Addition of troy weight.

lb.	*oz.*	*pw.*	*gr.*	*lb.*	*oz.*	*pw.*	*gr.*
15	7	13	12	145	9	12	18
18	6	4	20	726	8	14	10
11	10	16	18	389	7	6	13
9	4	10	22	83	10	16	20
19	11	18	4	130	0	10	12
22	0	0	0	74	7	18	0
7	5	4	4	1550	8	19	1

Addition of Apothecaries weight.

lb.	oz.	dr.	ſc.	gr.
48	7	1	0	14
74	5	5	2	10
64	10	7	1	11
17	8	1	0	16
34	9	6	1	9
240	5	6	1	0

lb.	oz.	dr.	ſc.	gr.
60	3	4	0	10
48	10	6	0	14
34	8	2	1	15
18	11	2	2	11
160	7	1	2	15
35	2	5	1	7
353	7	7	0	12

Addition of Avoirdupois weight.

Tuns.	C.	qrs.	lb.
75	13	1	15
48	7	3	21
60	11	1	17
21	7	0	25
12	16	0	11
218	17	0	5

lb.	oz.	gr.
36	10	12
22	11	13
11	7	4
15	4	10
20	10	9
106	13	0

Addition of liquid meaſure.

Tuns.	pipes	hhds	gall.
45	1	1	48
15	0	1	17
38	0	0	47
12	1	0	56
21	1	1	18
133	0	1	60

Tuns.	hhds.	gall.	pints.
30	3	40	4
12	0	28	6
47	5	60	5
57	3	22	3
17	0	0	0
168	1	26	2

Addition of dry meaſure.

Chld.	qrs.	buſh.	pec.
48	3	7	3
13	1	4	0
54	0	6	2
16	3	6	1
40	1	0	1
173	3	0	3

Qrs.	buſh.	pec.	gall.
17	3	1	1
50	1	3	0
14	5	3	1
40	2	0	1
30	0	3	0
152	5	3	1

Addition of long measure.

Yards.	qrs.	nails.	Ells.	qrs.	nails.
35	3	3	57	1	3
14	1	2	13	3	2
74	2	3	48	2	1
38	0	1	50	1	0
30	1	0	74	0	2
15	0	0	17	1	0
208	1	1	260	0	0

Addition of land measure.

Acres.	roods.	perches.	Acres.	roods.	perches.
12	3	18	86	1	36
14	0	24	47	3	24
30	2	19	73	2	18
48	3	30	60	0	7
28	1	38	4	2	8
50	3	26	14	1	14
185	3	35	286	3	27

The proof of addition.

Addition is proved after this manner. When you have found out the sum of the number given, then separate the uppermost line from the rest with a stroke or dash of the pen, and then add them all up again as you did before, leaving out the uppermost line; and having so done, add the new invented sum to the uppermost line you separated; and if the sum of those two lines be equal to the sum first found out, then the work was performed true, otherways not. As for example: let us prove the first example of addition of money, whose sum we found to be 265l. 9s. 5d. 2qrs. and which we prove thus. Having separated the uppermost number from the rest by a line as you see in the margin; then add the same together again, leaving out the said uppermost line, and the sum thereof I set under the first sum

l.	s.	d.	q.
136	13	4	2
79	7	10	3
33	13	9	1
15	9	5	0
265	9	5	2
128	16	1	0
265	9	5	2

or true ſum, which doth amount to 123l. 16s. 1d. 0 qrs. then again I add this new ſum to the uppermoſt line that before was ſeparated from the reſt, and the ſum of thoſe two is 265l. 9s. 5d. 2qrs. the ſame with the firſt ſum; and therefore I conclude that the operation was rightly performed,

The main end of addition in queſtions reſolvable thereby, is to know the ſum of ſeveral debts, parcels, integers, &c. Some queſtions may be theſe that follow.

Queſt. 1. There was an old man whoſe age was required. To which he replied, I have ſeven ſons, each having two years between the birth of each other; and in the 44th year of my age my eldeſt ſon was born, which is now the age of my youngeſt. I demand, What was the old man's age?

Now, to reſolve this queſtion, firſt ſet down the father's age at the birth of the firſt child, which was 44; then the difference between the oldeſt and the youngeſt, which is 12 years; and then the age of the youngeſt, which is 44; and then add them all together; and their ſum is 100, the complete age of the father.

44	
12	
44	
100	

Queſt. 2. A man lent is friend at ſeveral times theſe ſeveral ſums, viz. at one time 63l. at another time 50l. at another time 48l. at another time 156l. Now, I deſire to know how much he lent him in all?

Set the ſums lent under one another as you ſee in the margin; and then add them together, and you will find the ſum to amount to 317l. which is the total of all the ſeveral ſums lent, and ſo much is due to the creditor.

63	
50	
48	
156	
317	

Queſt. 3. From London to Ware is 26 miles, thence to Huntington 29 miles, thence to Stamford 21 miles, thence to Tuxford 36 miles, thence to Wentbridge 25 miles, from thence to York 20 miles. Now I deſire to know how many miles it is from London to York, according to this reckoning?

Now to anſwer this queſtion, ſet down the ſeveral diſtances given, as you ſee in the margin; and add them together, and you will find their ſum to amount to 151; which is the true diſtance in miles between London and York.

20
29
21
36
25
20
151

Queſt. 4. There are two numbers, the leaſt whereof is 40, and the difference 14. I deſire to know what is the greateſt number, and alſo what is the ſum of both? Firſt ſet down the leaſt, viz. 40 and 14 the difference; and add them together, and the ſum is 54 for the greateſt number. Then I ſet 40 (the leaſt) under 54, (the greateſt.) and add them together, and their ſum is 94, equal to the greateſt and leaſt numbers.

	40
	14
Greateſt	54
Leaſt	40
	94

Of ſubtraction of whole numbers.

1. SUbtraction is the taking of a leſſer number out of a greater of like kind, whereby to find out a 3d number, being or declaring the inequality, exceſs or difference between the numbers given. Or, ſubtraction is that by which one number is taken out of another number given, to the end that the reſidue or remainder may be known; which remainder is alſo called the reſt, remainder or difference of the numbers given.

2. The number out of which ſubtraction is to be made, muſt be greater, or at leaſt equal with the other number given. The higher or ſuperior number is called the major number; and the lower or inferior is called the minor number; and the operation of ſubtraction being finiſhed, the reſt or remainder is called the difference of the numbers given.

3. In ſubtraction place the numbers given reſpectively the one under the other, in ſuch ſort as like degrees, places, or denominations may ſtand in the ſame ſeries, viz. units under units, tens under tens, pounds under pounds, &c. feet under feet, and parts under parts,

&c. This being done, draw a line underneath, as in addition.

4. Having placed the numbers given as is before directed, and drawn a line under them, ſubtract the lower number (which in this caſe muſt always be leſs than the uppermoſt) out of the higher number, and ſubſcribe the difference or remainder reſpectively below the line; and when the work is finiſhed, the number below the line will give you the remainder.

As for example: let 364521 be given to be ſubtracted from 795836 I ſet the leſſer under the greater, as in the margin, and draw a line under them;

then beginning at the right hand, I ſay, I out	795836
of 6 and there remains 5, which I ſet in order	364521
under the line. Then I proceed to the next,	———
ſaying 2 from 3 reſts 1, which I note alſo un-	431315
der the line. And thus I go on till I have fi-	

niſhed the work. And then I find the remainder or difference to be 431315.

5. But if it ſo happen, as commonly it doth that the lowermoſt number or figure is greater than the uppermoſt; then, in this caſe, add 10 to the uppermoſt number, and ſubtract the ſaid lowermoſt number from their ſum, and the remainder place under the line; and when you go to the next figure below, pay an unit, by adding it thereto for the 10 you borrowed before, and ſubtract that from the higher number of figures. And thus go on till your ſubtraction be finiſhed. As for example; let 437503 be given, from whence it is required to ſubtract 153827. I diſpoſe of the numbers as is before directed, and as you ſee in the margin; then I begin, ſaying, 7 from 3 I cannot, but, adding 10 thereto, I ſay,

7 from 13, and there remains 6; which I ſet	437503
under the line in order. Then I proceed to	153827
the next figure, ſaying 1 that I borrowed and	———
2 is 3 from 3 I cannot, but 3 from 10, and	283676
there remains 7; which I likewiſe ſet down as	

before. Then 1 that I borrowed and 8 is 9 from 5 I cannot, but 9 from 15, and there remains 6. Then 1 I borrowed and 3 is 4 from 7, and there remains 3. Then 5 from 3 I cannot but 5 from 13, and there remains 8. Then 1 I borrowed and 1 are 2 from 4, and

there refts 2. And thus the work is finiſhed. And after theſe numbers are ſubtracted from one another, the inequality, remainder, exceſs, or difference, is found to be 283676. Exan ples for thy further experience may be thoſe that follow.

From 3469916	From 361576
Take 738642	Take 5864
Reſts 2731274	Reſts 355712

6. If the ſum or number to be ſubtracted is of ſeveral denominations, place the leſſer ſum below the greater, and in the ſame rank and order as is ſhewed in addition of the ſame numbers. Then begin at the right hand; and take the lower number out of the uppermoſt, if it be leſſer; but if it be bigger than the uppermoſt, then borrow an unit from the next greater denomination, and turn into the parts of the leſs denomination, and add thoſe parts to the uppermoſt, noting the remainder below the line. Then proceed, and pay one to the next denomination for that which you borrowed before; and proceed in this order, until the work be finiſhed. An example of this rule may be this that followeth. Let 375 *l* 13*s* 7*d* 1*qr* be given, from whence let it be required to ſubtract 57 *l* 16*s* 3*d* 2*qrs*. In order whereunto I place the numbers as you ſee in the margin. And thus I begin at the leaſt denomination, ſaying, 2 from 1 I cannot, therefore I borrow 1 penny from the next denomination, and turn it into far things, which is 4; and adding 4 to 1, which is 5, I ſay 2 from 5, and there remains 3; which I put under the line. Then going on, I ſay, 1 that I borrowed and 3 is 4 from 7, and there reſts 3. Then going on, I ſay, 16 from 13, I cannot, but borrowing 1 pound, and turning it into 20 ſhillings, I add it to 13: and that is 33, wherefore I ſay, 16 from 33, and there remains 17, which I ſet under the line; and go on, ſaying, 1 that I borrowed and 7 is 8 from 5 I cannot, but 8 from 15; and there remains 7; then 1 that I borrowed and 5 is 6

	l.	*s.*	*d.*	*qr.*
	375	13	7	1
	57	16	3	2
	317	17	3	3

from 7. there reſts 1. and 0 from 3 reſts 3. And I find the remainder or difference to be 317*l* 17*s* 3*d* 3*qrs*.

An example of troy weight may be this. I would ſubtract 17*lb* 10 *oz* 11 *pw* 20 *gr* from 24 *lb* 5 *oz* 0 *pw* 8 *gr*. I place the numbers according to the rule; and begin, ſaying 20 from 8 I cannot, but borrow 1 penny weight which is 24 grains, and add them to 8. and they are 32, wherefore I ſay, 20 from 32 reſts 12. Then 1 that I borrowed and 11 is 12 from 0 I cannot, but 12 from 20, borrowing an ounce, which is 20 penny weight, and there remains 8. Then 1 that I borrowed and 10 is 11 from 5 I cannot, but 11 from 17, and there reſts 6. Then 1 that I borrowed and 7 is 8 from 4 I cannot, but 8 from 14. and there reſts 6 Then 1 that I borrowed and 1 is 2 from 2, and there reſts nothing. So that I find the remainder or difference to be 6*lb* 6*oz* 8 *pw* 12 *gr*.

	lb	*oz*	*pw*	*gr*
	24	5	0	8
	17	10	11	20
	6	6	8	12

7. I many times happeneth, that you have many ſums or numbers to be ſubtracted from one number; as ſuppoſe a man ſhould lend his friend a certain ſum of money, and his friend hath paid him part of his debt at ſeveral times. Then before you can conveniently know what is ſtill owing, you are to add the ſeveral numbers or ſums of payments together, and ſubtract their ſum from the whole debt, and the remainder is the ſum due to the creditor. As ſuppoſe A lendeth to B 564 *l* 16 *s* 10 *d* and B hath repaid him 79*l* 16*s* 8*d* at one time, and 163*l* 18*s* 11*d* at another time, and 241*l* 15*s* 8*d* at another time; and you would know how the accompt ſtandeth between them, or what more is due to A. In order whereunto I firſt ſet down the ſum which A lent, and draw a line underneath it; then under that line I ſet the ſeveral ſums of payment

		l.	*s.*	*d.*
Lent		564	16	10
Paid at ſeveral payments		79	16	8
		163	18	11
		241	15	8
Paid in all		485	11	3
Remains		79	5	7

as you ſee in the margin; and having brought the ſeveral ſums of payment into one total, I find their ſum amounteth to 485l 11s 3d, which I ſubtract from the ſum firſt lent by A, and I find the remainder to be 75l 5s 7d, and ſo much is ſtill due to A.

When the learner hath good knowledge of what hath been already delivered he will with eaſe underſtand the following examples.

Subtraction of money.

	l.	s	d.	l	s	d	qrs
Borrowed	374	10	11	703	10	10	1
Paid	97	15	11	9	3	11	2
Remains	276	14	4	691	6	11	3
Borrowed	1000	0	0	711	3	0	0
Paid	19	7	0	11	13	0	1
Remains due	970	13	0	699	9	11	3
Borrowed - -				3300	0	0	0
Paid at ſeveral payments				170	10	4	0
				360	13	10	1
				590	3	10	3
				74	4	11	3
Paid in all				1195	13	0	3
Remains due				2104	6	11	1

Subtraction of troy weight.

	lb	oz	dr	gr
Bought	174	0	13	0
Sold	78	4	16	15
Remains	95	7	16	0

	lb.	oz.	dr.	gr.
Bought	470	10	1	0
Sold at ſeveral times	60	0	0	0
	35	10	18	0
	16	7	9	9
	48	4	0	0
	61	11	19	23
	23	0	0	0
Sold in all	245	10	7	7
Remains unſold	224	11	13	17

Subtraction of apothecaries weight.

	lb	oz	dr	ſc	gr	lb	oz	dr	ſc	gr
Bought	12	4	3	0	0	20	0	1	0	7
Sold	8	5	1	1	15	10	0	1	2	12
Remains	3	11	1	4	5	9	11	7	0	15

Subtraction of avoirdupois weight.

	C	qrs	lb	T	C	qrs	lb	oz	dr
Bought	35	0	15	5	7	1	10	10	5
Sold	16	2	20	3	17	1	18	9	13
Remains	18	1	23	1	9	3	22	0	8

Subtraction of liquid meaſure.

	Tuns	hhds	gals	Tuns	hhds	gal	pints
Bought	40	1	30	60	3	42	4
Sold	26	3	40	15	0	46	6
Rem.	23	3	53	44	2	58	6

Subtraction of dry meaſure.

	Chal	qrs	buſh	pec	Chal	qrs	buſh	pec
Bt.	100	0	0	0	173	2	3	2
Sd.	54	1	4	3	146	2	3	3
Rem.	45	2	3	1	26	2	7	3

Subtraction of long measure.

	Yards	qrs	nails	Yards	qrs	nails
Bt.	160	0	0	344	0	1
Sold	95	1	2	177	0	3
Rem.	64	2	2	166	3	2

Subtraction of land measure.

	Acres	roods	perch.	Acres	roods	perch.
Bt.	140	2	13	600	0	0
Sold	70	3	12	54	0	16
Remains	69	3	1	545	3	24

Proof of subtraction.

Sums in this rule are eafi'y proved, by adding their remainders to their leſſer numbers; which (if right) will make the greater.

MULTIPLICATION.

MUltiplication may be accounted the moſt ſerviceable rule in arithmetic: it performeth the work of many additions in the moſt compendious manner, brings numbers of great denominations into ſmall, as pounds into ſhillings, pence, or farthings; tuns into hundreds, quarters, pounds, or ounces, &c. and by knowing the value of one thing, we find the value of many.

In multiplication obſerve theſe three terms, multiplicand, multiplier, product.

1. The multiplicand (generally the greater of the two numbers) is the number to be multiplied.

2. The multiplier (generally the leſſer of the two numbers) is the number to be multiplied with.

3. The product, is the reſult of the work, or the anſwer to the queſtion. But before any thing can be done

to the purpose, it is necessary to learn the following table perfectly by heart.

The multiplication Table.

3 times	3	9
	4	12
	5	15
	6	18
	7	21
	8	24
	9	27
4 times	4	16
	5	20
	6	24
	7	28
	8	32
	9	36
5 times	5	25
	6	30
	7	35
	8	40
	9	45
6 times	6	36
	7	42
	8	48
	9	54
7 times	7	49
	8	56
	9	63
8 times	8	64
	9	72
9 times	9	81
12 times	2	24
	3	36
	4	48
	5	60
	6	72
	7	84
	8	96
	9	108
	10	120
	11	132
	12	144

What is the amount of 3 times 654?

Answer, If you set the number 654, 3 times down on paper, one over another, the total will be 1962.

But such questions are done by this rule of multiplication much readier, for being set down thus:

654 Multiplicand
3 Multiplier

Now to know how much 3 times 654 is, begin thus, saying, 3 times 4 is 12, the figure 2 of 12, set below

the line, nad bear the 10 of the 12 in mind, as 1; next 3 times 5 is 15, and the 1 bore in mind, makes 16, so I set 6 below the line, and bear the ten in mind as one; next, I say, 3 times 6 is 18 and 1 bore in mind makes 19, which I set down, and the work will stand as in the margin.

1962
654
3

How many is 3 times 472? Set the figures down as in the margin; then say 3 times 2 is 6, which place under the 2 in the multiplicand; then 3 times 7 is 21: set down 1 under 7, and carry 2, for 2 tens, as in addition of one denomination; then 3 times 4 is 12, and 2 is 14, which I set down, and the product is 1416, that is 3 times 472 makes so much; and may be proved by addition, by setting down 472 three times in additional order, and casting it up, which makes the assertion good in the second definition, that this rule compendiously performs the office of addition. Likewise the foregoing examples agree with the first definition; for as 3 times 472 makes 1416 so doth 472 times 3 makes the same number.

472
3
1416

Example. Again, How many makes 742 multiplied by 4?

742 Multiplicand
4 Multiplier
2968 Product

Here I say, 4 times 2 is 8, and 4 times 4 is 16; 6 and carry 1: and 4 times 7 is 28, and 1 is 29, which set down; so the whole product is 2968, as per example.

More examples of one figure in the multiplier, are these, viz.

Multiplicand	7420	4444	7468	90701	56789
	5	6	7	8	9
Product	37100	26664	52276	725632	511101

In compound multiplication.

When the multiplier consists of more figures than one, you must begin with that figure which is in the place of

units of the multiplier, and go through the whole multiplicand, by multiplying each figure of it first by that unit figure, and then by the next, to wit, by the figure in the place of tens in the multiplier, then with the third, &c. to the last; always remembering to place the first figure of every product or line (for you will ever have as many as you have significant figures in the multiplier) I say remember to place the figure of every line exactly and perpendicularly under the figure you multiply by, and then add the several lines or products together, which so collected, gives the total product required, as in the examples following, viz.

Example.

How many is, or are 23 times 7426? First, begin with the unit figure 3 in the multiplier, saying, 3 times 6 is 18, 8 (which I set directly under 3, by which I multiply) and carry 1, then 3 times 2 is 6, and 1 is 7, then 3 times 4 is 12, 2 and carry 1, then 3 times 7 is 21 and 1 is 22. And so I have done with the first figure of the multiplier, viz. 3. Then I go to the next, that is 2, and say, twice 6 is 12, 2 and carry 1 (which 2 is placed in a direct line under 2 the multiplying figure) then twice 2 is 4 and 1 is 5, then twice 4 is 8, and lastly twice 7 is 14, which I set down, and I add the two products together, saying, 8 is 8, &c. and the total is the right and proper product or result of the multiplication, viz. 170798.

	7426
	23
	22278
	14852
	170798

527535	275827
85728	19725
4220280	1379135
1055070	551654
3692745	1930789
2637675	2482443
526535	275827
829707480	5440687575

When cyphers are intermixt with figures in the multiplier, then multiply by the figures as above; and when you come to a cypher in the multiplier, then set down another cypher exactly and perpendicularly under it; then begin the multiplicand again with the next figure to the cypher in the multiplier, and go through it in the same line, placing the first figure of that product next to the cypher towards the left hand; but then heed must be taken, that the next figure or cypher of the next line must be set down one degree farther towards the left hand, and not immediately under the last figure set down next to the cypher: as in the following examples may be fully understood.

24393	7864371	327586
402	23604	6030
48786	31457484	9827580
975720	47186226o	19655160
9795986	23593113	1975343580
	15728742	
	185630613084	

When you have a cypher or cyphers in the multiplier, at the beginning towards the right hand; then set it or them backwards from the place of units towards the right hand, and when you have multiplied by the figure or figures, annex the cypher or cyphers.

As in these examples.

4762	47962	4632
70	400	2600
33340	19184800	27792
		9264
		12043200

If you have cyphers in the units place, &c. both in the multiplicand and multiplier, then neglect the cy-

phers in both, and multiply by the figures, and annex as many cyphers to the total product as is the sum of the cyphers, both in multiplicand and multiplier.

As in these examples.

42600	42300	376400
220	12000	2400
852	846	15056
852	423	7528
937200	507600000	903360000

When you are to multiply by 10, 100, 1000, or 10000, it is only adding or annexing so many cyphers to the multiplicand, as is in the multiplier, that is either 1, 2, 3, or 4 cyphers, and the work is done. Example, Suppose I am to multiply 375 by the numbers above, if I multiply it by 10, then I join 0 to 375, and then it makes, or the product is, 3750: if by 100, then I annex 00, and then it makes 37500: if by 1000, I put to it 000, and then it produces 375000: and lastly, if by 10000, I then add 0000, and then it makes 37500000, &c. and thus may any number be multiplied, when the multiplier consists of an unit with any number of cyphers.

Suppose you want to know how many half-crowns there are in 246l. you know that 8 half crowns make a pound, wherefore set them down thus:

246l.

Multiply by 8 the half-crowns in a pound.

Answer 1968 the half crowns in all.

Again, In 1968 half-crowns how many pence?

Multiply by 30 the pence in half-a-crown.

Answer 59049 pence in 1968 half crowns.

And this ſerves to make out, that greater denominations are brought into ſmaller by this rule.

Admit you wanted to know the contents of a large table 34 feet long and 4 feet wide.

Multiply 34 the length
By 4 the breadth, and the

Anſwer will be 146 ſquare feet for the true contents of ſuch a table.

Multiplication of money.

Multiplication of money (what moſt would learn above every thing) hath great affinity with addition of money, the ſame method being taken in carrying one denomination to the next, viz. from farthings to pence, from pence to ſhillings, and from ſhillings to pounds. And as in addition (and other multiplications) you begin at the right hand, and proceed towards the left; ſo here you begin at the leaſt denomination, which is alſo at the right hand.

This method of accompting is the moſt apt and expeditious of all others, for ſmaller quantities; and therefore extremely neceſſary in making bills of parcels, &c. And is beyond all contradiction, as ſure and certain as any way whatſoever.

The general rule

Is always to multiply the price by the quaintity.

The firſt ſtep is, for quantities from 2 to 12, and this is done by one multiplier, as in the following example:

Example 1. What muſt I give for 6 pieces of cloth, if one coſt 7*l*. 12*s*. 6*d*.?

	l.	*s.*	*d.*
	7	12	6
Multiply the price by			6
And the product is the anſwer, viz.	45	15	0

Here I ſay 6 times 6 is 36 pence, which is juſt 3*s*. I ſet down 0 in the place of pence, and carry 3*s* to the place of ſhillings, exactly the ſame as in addition of money; then 6 times 12 is 72, and 3 is 75*s* or 3*l*. 15*s*. wherefore I ſet down 15 in the place of ſhillings, and carry 3 to the pounds; then 6 times 7 is 42 and 3 is 45*l*. So the whole amount of the cloth, at 7*l* 12*s* 6*d*. *per* piece, is 45*l*. 15*s*. as in the work, and very concile.

Queſtions proper for this Rule.

Queſtion 1. What is the contents of a ſquare piece of ground, whoſe length is 28 perches, and breadth 13 perches?

Anſwer, 364 ſquare perches: for multiplying 28 the length by 13 the breadth, the product is ſo much.

Queſtion 2. There is a ſquare battle, whoſe flank is 47 men, and the files 19 deep; what number of men doth that battle contain? *Facit* 893: for multiplying 47 by 19, the product is 893:

Queſtion 3. If any one thing coſt 4 ſhillings, what ſhall 9 ſuch things coſt? Anſwer, 36 ſhillings: for multiply 4 by 9, the product is 36.

Queſtion 4. If a piece of money or merchandize be worth or coſt 17 ſhillings, what ſhall 19 ſuch pieces of money or merchandize coſt? *Facit* 323 ſhillings, which is equal to 16*l* 3*s*.

Queſtion 5 If a ſoldier or ſervant get or ſpend 14*s*. *per* month, what is the wages or charges of 49 ſoldiers or ſervants for the ſame time? Multiply 49 by 14, the product is 686*s*, or or 34*l* 6*s* for the anſwer.

Queſtion 6. If in a day there are 24 hours, how many hours are there in a year, accounting 365 days to conſtitute the year? *Facit* 8760 hours: to which if you add the 6 hours over and above 365 days, as there is in a year, then it will be 8766 hours. Now if you multiply this 8766 by 60 you have the number of minutes in

Division of whole numbers.

1. DIvision is the ſeparating or parting of any number or quantity given, into any parts aſſigned; or to find how often one number is contained in another; or from any two numbers given, to find a third, that ſhall conſiſt of ſo many units, as the one of thoſe two given numbers is comprehended or contained in the other.

2. Diviſion hath three parts or numbers remarkable, viz. firſt, the dividend; ſecondly, the diviſor; thirdly, the quotient. The dividend is the number given to be parted or divided. The diviſor is the number given by which the dividend is divided; or it is the number which ſheweth how many parts the dividend is to be divided into. And the quotient is the number produced by the diviſion of the two given numbers, the one by the other.

So 12 being given to be divided by 3, or into three equal parts, the quotient will be 4 for three is contained in 12 four times; where 12 is the dividend, and 3 is the diviſor, and 4 is the quotient.

3. In diviſion ſet down your dividend, and draw a crooked line at each end of it: and before the line at the left hand place the diviſor, and behind that on the right hand place the figures of the quotient, as in the margin; where it is required to divide 12 by 3. Firſt, I ſet down 12 the dividend, and on each ſide of it do I draw a crooked line, and before that on the left hand do I place 3 the diviſor. Then do I ſeek how often 3 is contained in 12; and becauſe I find it 4 times, I put 4 behind the crooked line on the right hand of the dividend, denoting the quotient.

```
3) 12 (4
```

4. But if when the diviſor is a ſingle figure, and the dividend conſiſteth of two or more places: then, having placed them for the work, as is before directed, put a point under the firſt figure on the left hand of the dividend, provided it be bigger than, or equal to the diviſor; but if it be leſs than the diviſor, then put a point under the ſecond figure from the left hand of the dividend: which figures, as far as the point goeth from the left

hand, are to be reckoned by themſelves, as if they had no dependence upon the other part of the dividend, and, for the diſtinction's ſake, may be called the dividual. Then aſk how often the diviſor is contained in the dividual, placing the anſwer in the quotient. Then multiply the diviſor by the figure that you placed in the quotient, and ſet the product thereof under your dividual. Then draw a line under the product, and ſubtract the ſaid product from the dividual, placing the remainder under the ſaid line. Then put a point under the next figure in the dividend on the right hand of that to which you put the point before, and draw it down, placing it on the right hand of the remainder which you found by ſubtraction, which remainder, with the ſaid figure ſtanding next to it, ſhall be a new dividual. Then ſeek again how often the diviſor is contained in this new dividual, and put the anſwer in the quotient on the right hand of the figure which you put there before. Then multiply the diviſor by the laſt figure that you put in the quotient, and ſubſcribe the product under the dividual, and make ſubtraction, and to the remainder draw down the next figure from the grand dividend, (having firſt put a point under it,) and put it on the right hand of the remainder for a new dividual, as before, &c. and proceed thus till the work is finiſhed.

Obſerve this general rule in all kinds of diviſion.

Firſt, To ſeek how often the diviſor is contained in the dividual. Then, having put the anſwer in the quotient, multiply the diviſor thereby, and ſubtract the product from the dividual. An example or two will make the rule plain. Let it be required to divide 2184 by 6. I diſpoſe the numbers given as is before directed, and as you ſee in the margin, in order to the work.

Then becauſe 6 the diviſor is more than 2 the firſt figure of the dividend, I put a point under 1 the ſecond figure, which makes 21 for the dividual. Then do I aſk how often 6 the diviſor is contained in 21, and becauſe I cannot have it more than 3 times, I put 3 in the quotient, and thereby do I multiply the diviſor (6) and the product is 18 which I ſet in order under the dividual, and ſubtract it there-

```
6)2184(3
6)2104(3
  18
  ---
   3
```

from, and the remainder (3) I place in order under the line, as you see in the margin.

Then do I make a point under the next figure of the dividend, being 0, and draw it down, annexing it to the remainder, 3; so I have 38 for a new dividual. Then do I seek how often 6 is contained in 38; and because I cannot have it more than 6 times, I put 6 in the quotient; and thereby do I multiply the divisor (6) and the product (36) I put under the dividual (38), and subtract it therefrom, and the remainder (2) I put under the line, as you see in the margin.

```
6)2184(36
 . .
 18
 ---
 38
 36
 ---
  2
```

Then do I put a point under the next (and last) figure of the dividend, (being 4), and draw it down to the remainder (2); and putting it on the right hand thereof, it maketh 24 for a new dividual. Then I seek how often 6 is contained in 24: and the answer is 4, which I put in the quotient. and then multiply the divisor (6) thereby, and the product (24) I put under the dividual (24); and subtract it therefrom, and the remainder is 0. And thus the work is finished; and I find the quotient to be 364; that is, 6 is contained in 2184 just 364 times, or 2184 being divided into 6 equal parts, 364 is one of those parts.

```
.6) 2184 (364
 . . .
 18
 ---
  38
  36
  ---
   24
   24
   ---
   (0)
```

Again, if it were required to divide 2646 by 7, or into 7 equal parts, the quotient will be found to be 378; as appeareth by the operation on the margin.

```
7) 2646 (378
 . . .
 21
 ---
  54
  49
  ---
   56
   56
   ---
   (0)
```

So if it were required to divide 946 by 8, the quotient will be found to be 118, and 2 remaining after diviſion is ended. The work appeareth on the margin.

```
8) 946 (118
   8
   ---
   14
    8
   ---
    66
    64
   ---
     2
```

Many times the dividend cannot be exactly divided by the diviſor, but ſomething will remain; as in the laſt example, where 946 was given to be divided by 8, the quotient was 118, and there remaineth 2 after the diviſion is ended. Now what is to be done in this caſe with the remainder, the learner ſhall be taught when we come to treat of the reducing (or reduction) of fractions.

And here note, that if, after your diviſion is ended, any thing do remain, it muſt be leſs than your diviſor, for otherwiſe your work is not rightly performed.

Other examples are as follow.

```
8) 73464 (9183
   72
   --
    14
     8
    --
     66
     64
    --
      24
      24
     --
      (0)
```

```
9) 13758 (1528
   9
   --
    47
    45
   --
     25
     18
    --
      78
      72
     --
      (6)
```

5. But if the diviſor conſiſteth of more places than one, then chuſe ſo many figures from the left ſide of the dividend for a dividual, as there are figures in the diviſor, and put a point under the fartheſt figure of that dividual to the right hand, and ſeek how often the firſt figure on the left ſide of the diviſor is contain'd in the firſt figure on the left ſide of the dividual, and place the anſwer in the quotient, and thereby multiply your diviſor, placing your product under your dividual, and ſubtract it therefrom, placing the remainder below the line. Then put a point under the next figure in the dividend, and draw it down to the ſaid remainder, and annex it on the right ſide thereof, which makes a new dividual; and proceed as before till the work is finiſhed.

And if it ſo happen, that, after you have choſen your firſt dividual as is before directed, you find it to be leſs than the diviſor; then put a point under the figure more near to the right hand, and ſeek how often the firſt figure on the left ſide of the diviſor is contained in the two firſt figures on the left ſide of the dividual, and place the anſwer in the quotient, by which multiply the diviſor, and place the product thereof in order under the dividual, and ſubtract it therefrom, and then proceed as before.

Always remembring, that in all caſes of diviſion, if, after you have multiplied your diviſor by the figure firſt placed in the quotient, the product be greater than the dividual, then you muſt cancel that figure in the quotient, and, inſtead thereof, put a figure leſs by an unit, (or one) and multiply the diviſor thereby: and if ſtill the product be greater than the dividual, make the figure in the quotient leſs by an unit. And thus do, until your product be leſs than the dividual, or at the moſt equal thereto, and then make ſubtraction, &c.

So, if you would divide 9464 by 24, the quotient will be found to be 394. I firſt put down the given number, as is before directed in the third rule. Now, becauſe my diviſor conſiſteth of two figures, I therefore put a point under my ſecond figure from the left hand of my dividend, which is 4; wherefore I ſeek how often 2 (the firſt fi-

```
                3
24) 9464 (
    72       4
    ---
    24
```

gure on the left ſide of the diviſor is contain'd in 9 (the like firſt in the dividual) the anſwer is 4; which I put in the quotient, and thereby multiply all the diviſor, and find the product to be 96, which is greater than the dividual; wherefore I cancel the 4 in the quotient, and inſtead thereof, I put 3 (an unit leſs) and by it multiply the diviſor 24, and the product is 72; which I ſubtract from 94 the dividual, and the remainder is 22. Then do I make a point under the next figure 6 in the dividend, and draw it down, and place it on the right ſide of the remainder 22, and it makes 226 for a new dividual. Now, becauſe the dividual 226 conſiſteth of a figure more than the diviſor, therefore I ſeek how often 2 (the firſt figure of the diviſor) is contained in 22, the two firſt of the dividual: I ſay 9 times; wherefore I put 9 in the quotient, and thereby multiply the diviſor 24; the product (216) I place under the dividual 226, and ſubtract from it, and there remaineth 10.

```
24)9464(39
  ..
  72
  ---
 226
 216
 ---
  10
```

Then I go on and make a point under the next and laſt figure (4) in the dividend, and draw it down to the remainder 10, and it makes 104 for a new dividual; which is alſo a figure more than the diviſor: and therefore I ſeek how often 2 is contained in 10: I anſwer 5 times. But multiplying my diviſor by 5, the product is 120; which is greater than the dividual; and therefore I make it but 4: and by it multiply the diviſor, and the product is 96, which being placed under, and ſubtracted from the dividual, there remanineth 8. And thus the whole work of diviſion is finiſhed; and I find, that 9464 being divided by 24, or into 24 equal parts, is found to be 394, as was ſaid before, and the remainder is 8; as you ſee in the work on the margin.

```
24)9464(394
  ..
  72
  ---
 226
 216
 ---
 104
  96
 ---
   (8)
```

Another example may be this. Let there be required the quotient of 1183653 divided by 385. Firſt I diſpoſe of the numbers in order to their dividing; and be-

Cauſe 118. the three firſt figures of the dividend, is leſs than the diviſor 385, I therefore make a point under the fourth figure which is 3, and ſee how often 3 (the firſt figure of the diviſor) is contained in 11: the anſwer is 3, which I put in the quotient, and thereby multiply the diviſor 385, and the product is 1155, which I ſubtract from the dividual 1183, and there remains 28. Then, as before, draw down the next figure, which is 6, and place it before the remainder 28: ſo have I 286 for a new dividual: and becauſe it hath no more figures than the diviſor, I ſee how often 3 (the firſt figure in the diviſor) is contained in 2 (the firſt figure of the dividual) and the anſwer is 0; for a greater number cannot be contained in a leſſer; wherefore I put 0 in the quotient, and thereby (according to the 5th rule) I ſhould multiply my diviſor: but if I do, the product will be 0; and 0 ſubtracted from the dividual 286, the remainder is the ſame. Wherefore I draw down the next figure (5) from the dividend, and put it before the ſaid remainder 286: ſo have I 2865 for a new dividual; and becauſe it conſiſteth of four places, viz. a place more than the diviſor, I ſeek how often 3 (the firſt figure of the diviſor) is contained in 28 (the two firſt of the dividual) and I ſay there is 6 times three in 18; but multiplying the whole diviſor (385) thereby, I find the product to be 3465 which is greater than the dividual 2865: wherefore chuſe 8, which is leſs by an unit than 9; and thereby I multiply the diviſor 385, and the product is 3080, which is ſtill greater than the ſaid dividual: wherefore I chuſe another number yet an unit leſs, viz. 7, and having multiplied my diviſor thereby, the product is 2695; which is leſs than the dividual 2865; wherefore I put 7 in the quotient, and ſubtract 2695; from the

```
385) 1183653 (3
     1155
     ----
       28

385) 1183653 (30
     1155
     ----
      286

385) 1183653 (307
     1155
     ----
     2865
     2695
     ----
      170
```

dividual 2865, and there remains 170. Then I draw down the laſt figure (3) in the dividend, and place it before the ſaid remainder 170, and it makes 1703 for a new dividual. Then (for the reaſon above ſaid (I ſeek how often 3 is contained in 17 : the anſwer is 5, but multiplying the diviſor thereby the product is 1925 and greater than the dividual, wherefore I ſay it will bear 4, an unit leſs, and by it I multiply the diviſor 385, and the product is 1540, which is leſs than the dividual, and therefore I put 4 in the quotient, and ſubtract the ſaid product from the dividual, and there remaineth 163. And thus the work is finiſhed, and I find that 1183653 being divided by 385, or in 385 equal ſhares or parts, the quotient or one of thoſe parts, is 3074, and beſides there is 163 remaining.

```
385)1183653(3074
    ....
    1155
    ----
    2865
    2695
    ----
    1703
    1540
    ----
    (163)
```

And thus the learner being well verſed in the method of the foregoing examples, may be ſufficiently qualified for the diviſion of any greater ſum or number into as many parts as he pleaſeth, that is, he may underſtand the method of dividing by a diviſor that conſiſteth of 4, 5, or 6, or any greater number of places, the method being the ſame with the foregoing examples in every reſpect.

Other examples in diviſion

```
27986)83568479O(29860        196374)47398601 8(2413
      ....                             ....
      55972                            392748
      ------                           ------
      275964                           812380
      251874                           785496
      ------                           ------
      240907                           268841
      223888                           196374
      ------                           ------
      170199                           724678
      167916                           589122
      ------                           ------
Remains 22803                  Remains 135556
```

So if you divide 47386473 by 58736, you will find the quotient to be 806, and 45257 will remain after the work is ended.

In like manner, if you would divide 3846739204 by 483064 the quotient will be 7963, and the remainder after division will be 100572.

When the divisor is 3, 4, 5, 6, or more figures, there is a sure and easy way of performing the work truly, by making a table of the divisor, which may be done by addition, or multiplying the divisor by 2, 3, 4, &c.

Admit you are to divide 987654321 by 123456.

```
123456)987654321(8000
       987648...
       -------
            6321
```

Here having noted the number of figures in the divisor, which here is six, I make a point under the seventh figure, or place of the dividend, &c.

1	123456
2	246912
3	370368
4	493824
5	617280
6	740736
7	864192
8	987648
9	1111104

This table is made by doubling the first line, which is 246912, which added to the first or uppermost line, gives the third line 370368, which also added to the first line makes 493824 for the fourth line or product, and so of the rest, still remembring to add the subsequent line, till you come to the last line of 9 times, which is 1111104. The truth of which may be proved by multiplying the first or uppermost line by 2, 3, 4, 5, &c. and if you commit an error by addition it may be found out, or corrected by multiplication.

The uſe of the ſaid table.

When you have pointed out your number of places in the dividend, caſt your eye on the table, and at the firſt view you may know how many times you can take, as in this example, 7 times is too little, and 9 times too much, wherefore I ſet down 8 in the quotient, and then multiply and ſubtract, and the remainder is 6, to which I bring down 3, and put 0 in the quotient, then to the 63 I bring down 2, and place another 0 in the quotient, then to 632 I bring down 1 the laſt figure in the dividend, but ſtill it will not bear any time or times, wherefore I put another 0 in the quotient, and ſo the work is done, and the quotient is 8000, and the remainder 6321, as in the work.

Abbreviations.

(1ſt.) If there are any cyphers on the right hand of your diviſor, you may cut off ſo many cyphers, or figures, on the right hand of your dividend, but remember to bring them down (if figures) to the remainder.

Example.

```
21|00 )8645|29( 411
   84
  ---
   24
   21
  ---
    35
    21
  ----
   1429
```

(2dly.) By the foregoing rule you may obſerve, that to divide by 10, 100, 1000, &c. is only to cut ſo many figures from the right hand of the dividend, as there are cyphers in the diviſor.

Example.

1|000)43682|735)

So the quotient is 43682, the remainder 735.

(3dly.) When your diviſor is 12, or conſiſts only of one ſingle figure, or can be reduced to one by cutting

off cyphers from its right hand, the work may be eaſily performed in one line, thus:

RULE.

Drawing a line under the dividend, ſet down under its firſt figure, how often the diviſor is contained in it: what remains imagine placed before the next figure, and, conſidering how often your diviſor is contained in the ſum it makes, ſet down the number underneath as before, and ſo proceed through all the figures, ſet down what remains at laſt, in the place where your quotient uſed to ſtand.

Examples.

4)93645(1	12)83675(11	7|00(5635|15
23411	6 72	805

If you are to divide ſeveral numbers by one common diviſor (as in the calculating of tables, &c.) that you may know exactly at once how often your diviſor will go, in ſome convenient corner make a table of your diviſor, by multiplying it ſeverally by all the 9 digits, thus, ſuppoſe 562 your diviſor:

562	1
1124	2
1686	3
2248	4
2810	5
3372	6
3934	7
4496	8
5058	9

Proofs of diviſion.

(1ſt.) Multiplication and diviſion mutually prove each other: for as if you divide the product of a multiplication by the multiplier, the quotient will be the multiplicand: ſo if you multiply the quotient of a diviſion by the diviſor (taking in the remainder) the product will be the dividend.

(2*dly.*) Another proof of diviſion is, by adding together thoſe lines in the following example, marked with aſteriſms (being the particular products of the diviſor, multiplied ſeverally by each figure in the quotient, together with the remainder of the diviſion) the total of which, if right, will be the dividend.

(3*dly.*) Diviſion may alſo be proved as multiplication, by a croſs, thus; caſting out the nines from the diviſor, and quotient, place the remainders on its right and left ſides, then multiplying the two figures ſo placed together, and caſting the nines from the product, and what's left to the remainder of the diviſion, and ſtill caſting out the nines, let the overplus be placed at the top; then alſo caſting the nines from the dividend, ſet down the figure remaining at the bottom, which if it agrees with that at the top, the work may be ſuppoſed right. See each proof in the following

Example.

736)863256(1172

	736*	736
	1272	7032
3	736*	3516
7 — | — 2	5365	8204
3	5152*	862592
3d Proof	2136	664 Remainder
	1472*	863256 1ſt Proof.
	664*	
	863206 2d Proof.	

REDUCTION.

1. REduction is that which brings together two or more numbers of different denominations into one denomination; or it ſerveth to change or alter numbers, money, weight, meaſure, or time from one denomination to another; and likewiſe to abridge fractions to the loweſt terms; all which it doth ſo preciſely, that

the firſt proportion remaineth without the leaſt jot of error or wrong committed: ſo that it belongeth as well to fractions as integers; of which in its proper place. Reduction is generally performed ether by multiplication or diviſion. From whence we may gather, That,

2 Reduction is either deſcending or aſcending.

3. Reduction deſcending is, when it is required to reduce a ſum or number of a greater denomination into a leſſer, which number, when it is ſo reduced, ſhall be equal in value to the number firſt given in the greater denomination; as if it were required to know how many ſhillings, pence, and farthings, are equal in value to an hundred pounds? or, how many ounces are contained in 45 hundred weight? or how many days, hours, or minutes, there are in 240 years? &c. And this kind of reduction is generally performed by multiplication.

4. Reduction aſcending is when it is required to reduce or bring a ſum or number of a ſmaller denomination into a greater, which ſhall be equivalent to the given number; as ſuppoſe it were required to find how many pence, ſhillings or pounds, are equal in value to 43785 farthings? or how many hundreds are equal to (or in) 3748 pounds, &c. And this kind of reduction is always performed by diviſion.

5. When any ſum or number is given to be reduced into another denomination, you are to conſider whether it ought to be reſolved by the rule deſcending or aſcending. viz. by multiplication, or diviſion. If it be to be performed by multiplication, conſider how many parts of the denomination into which you would reduce it are contained in an unit or integer of the given number, and multiply the ſaid given number thereby, and the product thereof will be the anſwer to the queſtion. As, if the queſtion were In 38 pounds how many ſhillings, here conſider, that in one pound are 20 ſhillings, and that the number of ſhillings in 38 pounds, will be 20 times 38; wherefore I multiply 38 by 20, and the product is 760, and ſo many ſhillings are contained in 38 l. as in the margin.

38	
20	
760	

But when there is a denomination or denominations between the number given and the number required,

you may, if you pleaſe, reduce it to the next inferior denomination, and then into the next lower than that, &c until you have brought it into the denomination required. As for example; let it be demanded, In 132 pounds how many farthings? Firſt, I multiply 132 (the number of pounds given) by 20 to bring it into ſhillings, and it makes 2640 ſhillings. Then do I multiply the ſhillings 2640 by 12 to bring them into pence, and it produceth 31680, and ſo many pence are contained in 2640 ſhillings or 132 pounds. Then do I multiply the pence, viz. 31680 by 4, to bring them into farthings, (becauſe 4 farthings is a penny), and I find the product thereof to be 126710, and ſo many farthings are equal in value to 132 pounds. The work is manifeſt in the margin.

132 pounds	
20	
2640 ſhillings.	
12	
5280	
2640	
31680 pence.	
4	
126710 farthings.	

6. And if the number propounded to be reduced is to be divided, or wrought by the rule aſcending, conſider how many of the given numbers are equal to an unit or integer in that denomination to which you would reduce your given number, and make that your diviſor, and the given number your dividend; and the quotient thence ariſing will be the number ſought or required. As for example; let it be required to reduce 2640 ſhillings into pounds. Here I conſider that 20 ſhillings are equal to one pound; wherefore I divide 2640, the given number, by 20, and the quotient is 132, and ſo many pounds are contained in 2640 ſhillings. In reduction deſcending and aſcending, the learner is adviſed to take particular notice of the tables delivered in the former part of this book, where he may be informed what multipliers or diviſors to make uſe of in the reducing of any number to any o-

l.	
20) 2640 (132	
...	
2	
—	
6	
6	
—	
4	
4	
—	
(0)	

ther denomination whatſoever, eſpecially Engliſh monies, weights, meaſures, time, and motion. But in this place it is not convenient to meddle with foreign coins, weights, or meaſures.

But if in reduction aſcending it happen that there is a denomination, or denominations between the number given and the number required, then you may reduce your number given into the next ſuperior denomination, and when it is ſo reduced, bring it into the next above that, and ſo on, until you have brought it into the denomination required. As for example;

Let it be demanded, In 126720 farthings how many pounds? Firſt I divide my given number, being farthings by 4, to bring them into pence, becauſe 4 farthings make one penny; and there are 31680 pence. Then I divide 31680 pence by 12, and the quotient giveth 2640 ſhillings. And then I divide 2940 ſhillings by 20, and the quotient giveth 132*l.* which are equal in value to 126720 farthings. See the work.

4) 126720	12) (31680	20) (2640	*l.* (132
10	24	2	
6	76	6	
4	72	6	
27	48	4	
24	48	4	
32	(0)	(0)	
32			
(0)			

7. When the number given to be reduced, conſiſteth of divers denominations, as pounds, ſhillings, pence, and farthings, or of hundreds, quarters, pounds, and ounces, &c. then you are to reduce the higheſt, or greateſt denomination into the next inferior, and add thereunto the number ſtanding in that denomination, which your greateſt or higheſt number is reduced to. Then reduce

that ſum into the next inferior denomination, adding thereto the number ſtanding in that denomination. Do ſo until you have brought the number given into the denomination propoſed. As, if it were required to reduce 48*l.* 13*s* 10*d.* into pence: firſt I bring 48*l.* into ſhillings, by multiplying it by 20, and the product is 960 ſhillings; to which I add the 13 ſhillings, and they make 973. Then I multiply 973 by 12, to bring the ſhillings into pence, and they make 11676; to which I add the 10 pence, and they make 11686 pence for the anſwer. See the work done.

l.	*s.*	*d.*
48	13	10
20		
960 ſhillings		
Add 13		
Sum 973 ſhillings		
12		
1946		
973		
11676 pence		
Add 10		
Sum 11686 pence		

8. If in reduction aſcending, after diviſion is ended, any thing remain, ſuch remainder is of the ſame denomination with the dividend.

Example. In 4683 farthings, I demand how many pounds? View the following operation.

First, I divide the given number of farthings, viz. 4783, by 4, to bring them into pence, and the quotient is 1195 pence, and there remaineth 3 after the work of diviſion is ended, which is 3 farthings.

Again, I divide 1195 pence, the ſaid quotient, by 12 to reduce 'em

4) 4783	12) 1195	20) 99	(4 pounds
4	108	8	
7	115	19 ſhillings	
4	108		
38	Rem. 7 pence		
36			
23	Facit 4 19 7 3		
20			
3 farthings remains.			

into ſhillings, and the quotient is 99 ſhillings, and there is a remainder of 7, which is 7 pence.

And then divide 99 ſhillings (the laſt quotient) by 20 to bring it into pounds, and the quotient is 4*l.* and there remaineth 19 ſhillings; ſo that I conclude that in 4783 (the propoſed number of farthings) there is 4*l* 19*s* 7*d* 3*qrs*.

More examples in the reduction of coin.

Queſt. In 438*l.* how many ſhillings? Facit 8760 ſhillings; for multiplying 438 by 20, the product amounteth to ſo much. See the work.

438 pounds
20
Facit 8760 ſhillings

Queſt. In 467*l* how many pences? Firſt multiply the given number of pounds (467 by 20. to bring it into ſhillings; and it makes 9340 ſhillings, then multiply the ſhillings by 12 and it produceth 112080 pence, thus,

467 pounds
20
9340 ſhillings
12
1868
934
Facit 112080 pence

Or it may be reſolved thus, viz. Multiply the given number of pounds (467) by (240) the number of pence in a pound, and the product is the ſame, viz. 112080 pence, as by the operation appeareth

467 pounds
240
1868
934
Facit 112080.

Queſt. In 5674 l. how many farthings? Firſt multiply the given number by 20, to bring it into ſhillings, and it produceth 113460 ſhillings, then multiply that product by 12, to bring it into pence, and it produceth 1361520 pence, then, laſtly, multiply the pence by 4, and it produceth 5446080 farthings. See the operation

5673 pounds
20

11346 ſhillings
12

22692
11346

1361520 pence
4

Facit 5446080 farthings

Or this queſtion might have been thus reſolved, viz. Multiply 5673 (the given number of pounds) by 960 (the number of farthings in a pound) and it produceth the ſame effect; as you ſee by the work.

5673 pounds
968

34038
51057

Facit 5446080

20 ſhillings
12
---
240 pence
4

960

Otherwiſe thus, Firſt bring the given number 5673l. into ſhillings, and multiply the ſhillings by 48 the number of farthings in a ſhilling, and the ſame effect is thereby likewiſe produced, viz.

5673 pounds
20

113,60 ſhillings
48

90768
45384

Facit 5446080 farthings.

12 pence.
4
---
48 farthings.

These various ways of operation are expreſſed to inform the judgment of the learner with the reaſon of the rule. More ways may be ſhewn, but theſe are ſufficient even for the meaneſt capacities.

Queſt, In 458l. 16s. 7d. 4 qrs. how many farthings? To reſolve this queſtion, conſider the ſeventh rule, and work as you are there directed, and you will find the foreſaid given numbers to amount to 440479 farthings, viz.

l.	s.	d.	qrs.
458	16	7	3
20			
9160			
Add 16	ſhillings		
Sum 9176	ſhillings		
12			
18352			
9176			
110112			
Add 7	pence		
Sum 110119	pence		
4			
440476			
Add 3	farthings		
Sum 440479	farthings		

This laſt queſtion, or any other of this kind, viz. where the number given to be reduced conſiſteth of ſeveral denominations, may be much more conciſely reſolved this way, viz. When you multiply the pounds by 20, to bring them into ſhillings, to the product of the firſt figure add the figure ſtanding in the place of units in the denomination of ſhillings; but becauſe the firſt figure in the

l.	s.	d.	qrs.
458	19	7	3
20			
9176	ſhillings		
12			
18359			
9176			
110119			
4			
Facit 440479	farthings		

multiplier is 0, I ſay 0 times 6 is nothing, but 6 is 6, which I put down for the firſt figure in the product. Then becauſe the multiplier is 0, I go no farther with it, for if I ſhould, the whole product would be 0; but proceed. And when I come to multiply by the ſecond figure in the multiplier, to the product of it I add the figure ſtanding in the place of tens in the denomination of ſhillings, which is 1; ſaying 2 times 8 is 16. and (the ſaid figure) 17. Then I ſet down 7, and carry the unit to the product of the next figure, as has been directed before. So that now you may have the whole product and ſum of ſhillings at one operation, which is the ſame as before. And when you multiply the ſhillings by 12, to bring them into pence, after the ſame manner, add to the product the number ſtanding in the denomination of pence; and ſo when you multiply the pence by 4, to bring them into farthing, add to the product the number ſtanding under the denomination of farthings See the laſt queſtion thus wrought on the margin of the preceding page.

Reduction of troy weight.

We now come to give the learner ſome examples in troy weight, wherein we ſhall be brief, having given ſo large a taſte of reduction in the former examples of coin. And now the learner muſt be mindful of the table of troy weight delivered in addition.

Queſt. In 482 lb. 7 oz. 13 pw. 21 gr. how many grains?

Multiply by 12, by 20, and by 24 taking in the figures ſtanding in the ſeveral denominations, according to the directions, given formerly, and you will find the product to be 2780013 grains, which is the number required, or anſwer to the queſtion. See the whole work as followeth.

	lb	oz.	pw.	gr.
	482	7	13	21
	12			
	971			
	482			
	5791 ounces			
	20			
	115833 penny weight			
	24			
	463333			
	231668			
Facit	2780013			

Queſt. In 2780013 grains, I demand how may lb. oz. pw. gr ?

This is but the foregoing queſtion inverted, and is reſolved by dividing by 24, by 20, and by 12, and the anſwer is 482 lb. 7 oz. 13 pw. 21 gr.

24)2780013	20)115833	12)5791	482
24	10	48	
38	15	99	
34	14	96	
140	18	31	
120	18	24	
200	3	Rem. 7 ounces.	
192	2		
81 Rem.	13 penny weight.		
72			
93	lb.	oz.	pw. gr.
72	Facit 482	7	13 21
Remains 21 grains.			

Reduction of avoirdupois weight.

In reducing of avoirdupois weight, the learner muſt have recourſe to the table of avoirdupois weight delivered before.

Queſt. In 47 C. 1 qr. 20 lb. How many ounces? Multiply by 4 by 28, and by 16, and the laſt product will be the anſwer, viz. 84992 ounces.

C. qr. lb.
47—1—20
4
189
28
1512
380
5312
16
32872
5312

Facit 84992 oz.

Queſt. In 84992 ounces, I demand how many C. qrs. lb. and oz.?

This is the foregoing queſtion inverted, and will be reſolved if you divide by 16 by 28, and by 4, and the anſwer is 47 C. 1 qr. 20 lb. equal to the given number in the foregoing queſtion.

16)84992	28) (5312	4) (189	C. qrs. lb. oz. (47 1 20 0
80	28	16	
49	251	29	
48	224	28	
9	272	1 qr.	
16	252		
32	20 pounds		
32			

Reduction of liquid measure.

Queſt. In 45 tuns of wine, how many gallons? Multiply by 4 and 63, the product is 11340 gallons for the anſwer.

45
4

180
63

54
108

Facit 11340

Queſt. In 34 rundlets of wine, each containing 18 gallons, I demand how many hogſheads?

Firſt, find how many gallons are in the 34 rundlets, which you may do if you multiply 34 by 18, the content of a rundlet, and the product is 612 gallons, which you may reduce into hogſheads, if you divide them by 63, and the quote will be 9 hogſheads, and 45 gallons. See the work.

34
18

272
34
---
63)612(9 hhds
567

Rem. 45 gall.

Facit 9 hhds. 45 gall.

Queſt. In 12 tuns, how many rundlets of 14 gallons per rundlet?

Reduce your tuns into gallons, and divide them by 14, the gallons in a rundlet, and the quotient, 216, is your anſwer. See the work.

12
4

48
63

144
288
---
14) 3024 (216 rundlets.
....
28

22
14

84
84
---
(0)

Facit 216 rundlets.

Reduction of long meaſure.

Queſt. I demand how many furlongs, poles, inches, and barley-corns will reach from London to York, it being accounted 151 miles?

151 miles
8 furlongs in a mile

1208 furlongs
40 poles in a furlong

48320 poles
11 half yards in a pole

4832
4832

531520 half yards
18 inches in a half yard

425216
53152

9567360 inches
3 barley-corns in an inch

28702080 Anſwer.

Queſt. The circumference of the earth (as all other circles are) is divided into 360 degrees, and each degree into 60 minutes, which upon the ſuperfices of the earth, are equal to 66 miles; now I demand how many miles, furlongs, perches, yards, feet, and barley corns, ill reach round the globe of the earth?

360 degrees
60 minutes or miles in a degree

21600 miles about the earth
8 furlongs in a mile

172800 furlongs about the earth
40 perches in a furlong

6912000 poles or perches about the earth
11 half yards in a perch

6912
6912

2) 76032000 half yards about the earth

(38016000 yards, viz. the half yards divided by 2
3

114048000 feet about the earth
12 inches in a foot

228096
114048

1368576000 inches about the earth
3 barley corns in an inch

Facit 4105728000 barley-corns

And ſo many will reach round the world, the whole being 21600 miles. So that if any perſon were to go round, and go 15 miles every day, he will go the whole circumference in 1440 days, which is 3 years 11 months and 15 days.

Reduction of time.

Queſt. In 28 years, 24 weeks, 4 days, 16 hours, 30 minutes, how many minutes?

Years, weeks, days, hours, min.
28——24——4——16—— 30
52 weeks in a year.

60
142

1480 weeks.
7

10364 days.
24

41462
20729

248752 hours.
60

14925150 minutes.

Note, That in resolving the last question after the method expressed, there are lost in every year 30 hours; for the year consisteth of 365 days and 6 hours; but by multiplying the year by 52 weeks, which is 364 days, you lose one day and six hours every year. Wherefore, to find an exact answer, bring the odd weeks, days and hours, into hours, and then multiply the year by the number of hours in a year, viz. 8766, and to the product add the hours contained in the odd time, and you have the exact time in hours; which bring into minutes as before.

	Days, hours.	Weeks, days, hours.
28	365 —6	24——4——16
8766	24	7
172	1466	172
172	730	24
197		694
228	8766 hours in a y.	345
249592 hours		4144
60		

1497550 min. in 28 years, and 4144 hours

So you ſee, that, according to the method firſt uſed to reſolve this queſtion, the hours contained in the given time, are 248752, but according to the laſt, beſt, or trueſt method, they are 249592, which exceeds the former by 840 hours.

But for moſt occaſions it will be ſufficient to multiply the given years by 365, and to the product add the days in the odd time, if there by any, and then there will be only a loſs of 6 hours in every year, which may be ſupplied by taking a fourth part of the given years, and adding to the contained days, and you have your deſire.

The Golden Rule, or Rule of Three Direct

IS ſo called from its extraordinary uſefulneſs, not only in arithmetical queſtions, but in all parts of the mathematics.

It is alſo called the rule of three, becauſe there are always three numbers given to find out a fourth: and it is properly called the rule of proportion, becauſe the firſt number bears ſuch proportion to the ſecond, as the third does to the fourth.

The deſign of this rule is, to ſhew how to find a fourth proportional number, by having three given numbers, which is deducible from the ſixteenth propoſition of the ſixth book of Euclid's elements.

The Rule is,

Multiply the ſecond and third numbers together, and divide the product by the firſt number, and the quotient thence ariſing is the fourth number ſought. Or,

Divide the ſecond number by the firſt, and multiply the quotient by the third, and the product is the number required: for the fourth number contains the third ſo often as the ſecond contains the firſt. And this is called direct proportion.

All queſtions in this rule of three conſiſt of three numbers, whereof two are always of one kind or denomination. As in this example.

If I give 10*s*. for 5 yards, what ſhall I give for 15 yards at the ſame rate ?

Now two of theſe are of the ſame kind, that is, the number 5 and 15, which are both yards, which place thus. The number concerning which the queſtion is asked, muſt be in the third place.

Now in this queſtion the 15 yards is the number, and the price of which the queſtion requires the value, place it therefore in the third place.

Then ſeek out the other number of the ſame kind or denomination, which muſt be yards alſo, which in this queſtion is 5 ; ſet this in the firſt place, and then the other number, that is 10*s*. will conſequently claim the ſecond place, and the anſwer to the queſtion will be always of the ſame denomination with it, which here is ſhillings.

Now the queſtion ſtated according to the foregoing rule ſtands thus,

If 5 yards coſt 10*s*. what will 15 yards coſt ?

15

5)150(30*s*. Anſwer.
15

00

Multiply the ſecond number by the third, and divide the product by the firſt.

Note, That the three numbers are 5, 10, 15.

Proof of the laſt queſtion.

What ſhall I pay for 5 yards, when 15 yards are ſold for 30*s*. ?

If 15 yards coſt 30*s*. what will 5 yards coſt ?

5

15)150(10*s*. Anſwer.
15

00

What is the intereſt of 75 pounds at the rate of 8*l.* per cent. per annum ?

The numbers will be ſtated thus,

L. P.	L. I.	L. P.
100	8	75

In this example there are two numbers that are principal money, and one that is intereſt, therefore the intereſt (according to the rule) muſt ſtand in the middle or ſecond place, the principal on which the intereſt dependeth, viz 100*l.* (8 being the intereſt thereof) muſt ſtand in the firſt place towards the left hand, and the other principal on which the fourth number (which is the number ſought for) dependeth, muſt poſſeſs the firſt place towards the right hand.

By theſe rules foregoing, you may with eaſe and certainty perform any operation in direct proportion, and for your further information take the exampes following.

Example. If the intereſt of 100*l.* for one year be 8*l.* what is the intereſt of 75*l.* for the ſame time

L. P.	L. I.	L. P.
100	8	75

100)600(6*l.* Anſwer.

Example. If 32 rundlets of brandy coſt 96*l.* what will 4 rundles coſt at that rate ?

Run.	L.	Run.
32	96	4

4

32)384(12*l.* Anſwer.

64

0 Remains

Example. If 12 bags of cotton wool coſt 184l. what will 17 bags coſt?

Bags l. Bags
12 184 17

1288 l s d
184 260 13 4 Anſwer.

12)3128(260l

72

8 pounds remain
20 ſhillings multiply

12)160(13 ſhillings

40

4 ſhillings remain
12 pence multiply

12)48(4 pence

0 remains

Note, That in the laſt example, when any thing remains that is reducible to a lower denomination, after it is ſo reduced, it muſt be divided continually by the firſt number.

Caſe.] When any of the three given numbers happen to be of divers denominations,

Rule.] You may reduce them into the loweſt denomination. And if your firſt number require to be reduced, your third muſt be reduced likewiſe into the ſame denomination as the firſt: for the firſt and third numbers before you begin your operation, muſt be always of one name or denomination.

Example. If 17 hogſheads of ſugar coſt 320l. 12s. what will 5 of theſe hogſheads be worth?

Hhds.	l.	s.	hhds.
17	320	12	5

20

6414 ſhillings } multiply
5 hhds. }

2)0)s. l s d q

17)32060 (1881 5 (94 5 10 2 6/17

150 8

146 0 remains

100

15 ſhillings remain } multiply
12 pence in a ſhill. }

30
15

17)180(10 pence

10 pence remain } multiply
4 farthings 1d }

17)40(2 farthings

6 farthings remain to be divided by 17

Note, That when you have multiplied the ſecond and third numbers together, and divided the product by the firſt, the quotient is of the ſame denomination as the ſecond number is, after you have reduced it (as in the laſt example) into its loweſt denomination given.

Example. If 4 C 1 qr 24 lb of ſugar coſt 14l. what will 18 C coſt?

C	qr	lb
4	1	24
4		
42		
45		

500 lb of sugar

l	C
14	18
	18
	18
	18

2016 lb of sugar
14 l. sterling } multiply

8064
2016

5100)28224(56 l. 8 s. 11 d. q 2 40/500

32

224 pounds remain
20 shillings 1 l. } multiply

5100)44180(8 shillings

480 shillings remain
12 pence in 1 s. } multiply

960
480

5100)57160

7

260 pence remain
4 farthings 1 d. } multiply

5100)10140(2 qrs

40 farthings remain to be divided by 500.

Note further, That what farthings remain, to be divided by the common diviſor (as in the laſt example) becauſe you can reduce them into no lower denomination, you may place them over your diviſor, as fractions of a farthing, which ſhall be explained when we come to treat of vulgar fractions, &c.

Caſe.] When the firſt number of the three given, is but an unit, the operation is performed by multiplication only.

Example. If I give 15s. for a pound of thread, what will 250 lb. coſt at that rate?

l	s	d
1	15	250

15

1250

250

3750s. anſwer, or 187l. 10s.

Example. At 14l. 10s. 6d. per bag of hops, what coſt 55 bags?

Bag	l	s	d	Bags
1	14	10	6	55

20

290 ſhillings

12

3486 pence

55 the 3d numb. } multiply

17430

17430

191730 pence anſ. or 7981. 17s. 6d.

Caſe.] When the third number of the three given, or that towards the right hand, is an unit, ſuch operation is performed by diviſion only; if the number need no reducing,

Example. If 40 pieces of broad cloth coſt 590 l. what will one piece coſt?

Pieces	l.	Piece
40	590	1

40)590(14½l. or 14l. 15s. answer

19

30 pounds remain

If one bushel of rye cost 3s. 6d. what will a last or 10 quarters cost after that rate?

First reduce the 3s 6d into pence, that is 42d. and the 10 quarters into bushels, that is 80, and set the question thus:

If 1 bushel cost 42d. what will 80 cost?

80

3360

The first number or place being 1, will neither multiply nor divide, then bring the 3360 into shillings by dividing by 12 as followeth.

12)3360(280 shillings
24

96
96

0

For the proof of this, and the like questions, reduce the answer into pence, to know whether your work be right as appears in the work.

210)2810(14l.
20

80
80

0

14l.
20

280
12

3360

If I paid 432l, for 525 quarters of malt, what is the price of 1 quarter after that rate?

Which being ſtated ſtands thus,

If 525 quarters coſt 432l what will 1 quarter coſt ?

In this queſtion you cannot multiply the ſecond number by the third, becauſe the third number [or place] is one.

Therefore to perform this queſtion with eaſe, reduce 432l into farthings by reduction, which makes 414720 farthings to be divided, which divide by 525, the quarters of malt, and the quotient, the anſwer is 789 farthings ; the remainder after the diviſion is ended, are but the parts of a farthing.

Laſtly, The 789 farthings being reduced, are 16s. $5\frac{1}{4}$d. Therefore, if 525, quarters of malt (or tods of wool or goods) be ſold for 432l. one quarter will coſt 16s. $5\frac{1}{4}$d. after that rate. Or which is better, reduce the 432l into ſhillings, and it gives 8640, which divide by 525, and the quotient is 16, and the remainder 240, which multiply by 12 the product is 2880, which divide by 525, the quotient is 5 pence, and the remainder 255 ; that multiply by 4, and the product 1020 divided as before, gives one farthing and $\frac{405}{525}$ parts of another farthing.

If a grocer bought $5\frac{3}{4}$ C. weight of nutmegs, which coſt him 163l. 13s. 8d. how may he ſell one pound weight without gain or loſs ?

Reduce the money into pence, it makes 39284d for the dividend, and $5\frac{3}{4}$ C. weight into pound weights by reduction makes 644 pound weight for the diviſor ; then divide the 39284 by 644, and the quotient gives 61 pence the price of one pound. viz. 5s. 1d.

Note, That what ſum of money you deſire to gain, add it to the price, and work as above, to know what you get by every ſingle pound.

Suppoſe the yearly rent of 20l. belonging to 7 landlords Reduce the 20l into farthings, and they are 19200, which divide by 7, the quotient gives 2742 $\frac{6}{7}$ farthings for each landlord, from which you may ſubtract the taxes.

By the ſame rule you may draw the compariſon of debts ; for if a man owe to ſeveral creditors, as ſuppoſe it comes to in all 35l. 16s. reduce it into farthings, and divide it by the number of pounds owing, &c.

Suppose a man leaveth 13l to pay his debts, and he owes one man 5l the second 6l and the third 7l which makes 18l what is each man's share ?

	l	s	d	q
To the first	3	12	2	2
—Second	4	06	8	0
—Third	5	01	1	2
	13	00	0	0

If 28 qrs of barley cost 30l 10 6d, tell me what 84 quarters come to at that rate ?

28 quarters cost 30l 10s 6d, what will 84 qrs cost ?

20

Shillings 610

12

1226

610

Price 7326

84

29304

58608

Sum 615384

28)615384(21978 pence

56

55

28

273

252

218

196

224

224

(0)

12

2l0 183l1—6

L 91—11—6

84 qrs comes to 91l 11s 6d

20

1831

12

3668

1931

21978

For a proof I reduce the 91l 11s 6d into pence

How many yards of cloth shall I buy for 21l 10s $1\frac{2}{3}$l when $3\frac{1}{3}$ are sold for 2l 14s 3d ?

First, reduce the 2l 14s 3d into farthings, which make 2604, for the first number ; next, the 3 yards and

an half into quarters, which make 14 for the ſecond number, and the 21l 10s 1½d and it makes 20646 farthings; then multiply that by 14, and the product is 289044, to be divided by 2604, and the quotient gives 111 quarters of yards, to divide by 4, (the quarters in a yard) and the quotient is 27 yards ¾ viz. 3 quarters, for anſwer.

Thus ſtated, being reduced.

Farthings	Quarters	Farthings
2604	14	20646
		14

If 1 pound of iron coſt 3½d, what will 7 C 3 qrs 17 lb coſt?

4

31 qrs of an C
28 lbs in ¼ of an C
take in 17 lb

255
63

Pounds 885 in 7 C 3 qrs 17 lb.
14 farthings in 3

3540
885

4)12390 farthings anſ.

12)3097 ½

2'0)2518 1

Anſwer L 12 18 1½.

Note, that this example may ſerve for a rule to reduce hundreds, quarters, and pounds into pounds; but moſt tradeſmen ſet the weights in ſhort, thus, 7—3—17 inſtead of ſetting them as above 7C 3qrs 17lb.

Beſides this way of proof, of reducing the total to farthings again, is moſt neceſſary for young learners, in moſt of the queſtions in the rule of three.

The Indirect Rule of Three.

IN the indirect rule of three, the numbers are in reciprocal proportion, that is, the fourth number to be found, is to bear the same ratio to the second as the third does to the first, but in an inverted, order; that is, the greater the third term is in respect to the first, the less must the fourth be in respect to the second.

This rule differs in its operation, from the direct, in that, after the question is stated, and the numbers of the statings prepared (as in the direct rule) your first and second must be multiplied together, and your third number be your divisor. The quotient, as before, will be the answer.

EXAMPLES.

Ex 1. What number of men must be employed to finish in 12 days, what 43 men would be 35 days about?

days men days
35 —43 —12
43

105
140

12.)1505

Answer, 125 men

Ex. 2.
a room w How many yards of stuff 3 qrs wide, will hang
hich requires 420 yards of 5 qrs wide?

qrs yds qrs
5 420 3
5
1

3)2100

Answer 700

The reaſon of this operation will appear plain (after what has been ſaid in the direct rule) by conſidering the laſt example. Now it is clear, that if of the ſtuff, being 5 quarters wide, there are 420 yards required, then were the ſtuff but 1 quarter wide, 5 times 420 yards, viz. 2100 yards muſt be allowed; conſequently, if the ſtuff be 3 quarters wide, one third part of thoſe yards will be ſufficient; therefore 2100 divided by 3, will give the true anſwer required, viz. 700 yards.

To know whether a queſtion belongs to the Direct or Indirect Rule of Three,

Obſerve, if the third number, being more than the firſt number requires more, or, being leſs, requires leſs, it is Direct; but if the third number, being more, requires leſs, or being leſs, requires more, it is Indirect.

Or, without any regard to the diſtinction of Direct and Indirect; if more is required, let the leſſer of the two extremes be the diviſor, if leſs the, greater.

More queſtions in the Indirect Rule of Three.

If I lend A 136l. for 3 months, how long muſt I keep 42l. of his, to requite myſelf?

Anſwer, 9 months, 2 weeks, 6 days.

If 46 clerks in 32 days finiſh a piece of writing, in what time would 55 clerks accompliſh the ſame?

Anſwer, 26 days, 9 hours, 9 minutes.

A garriſon, conſiſting of 1539 men, being beſieged, hath proviſion only for 12 days: but it being neceſſary they ſhould hold out three weeks, how many men muſt be ſent out?

Anſwer, 660 men.

The Double Rule of Three.

QUeſtions in this rule have five numbers propoſed, and are frequently anſwered by two ſtatings, though they may be performed by one as ſhall be ſhewn hereafter.

EXAMPLES.

Ex. 1 The carriage of 32 hundred weight 56 miles comes to 12s. After the ſame rate, what muſt I pay to have 78 hundred weight carried 94 miles?

C s C
1ſt if 32 —— 12 —— 78
12
——
s d
32)936(29 3 facit
64
——
296
238
——
Miles s d Miles ··8
Then, If 46 29 3 94 12
12 ——
——
351 32)96(3
4 96
—— —
1404 0
3159
——
56)32994(589
280
——
499
448
——
514
504
——
10

12)598)1
——
20)419
——
Facit 2l. 9s. 1d.

Note, the ſolution had been the ſame, if the miles had been made firſt and third numbers of the firſt ſtating; and the C weights the firſt and third numbers of the laſt.

Note alſo, this example may be done by one ſtating thus:

C s d
If 32 —— 12 —— 78
56 miles 94 miles

192 312
160 702

1792 7332
12

s d
1792)87684(49 1
7168 or
l s d
16304 2 9 1
16128

176
12

1792)2112(1
1792

320

Ex. 2. How many men muſt be employed to reap 420 acres in 17 days, if there were required 37 men to reap 54 acres in 5 days?

	Acres	Men	Acres
Firſt, If	53	37	420

37

2940
1260

	Days	Men	Days
Then, if	5	237	17

5

17)1435(84
136

75
68

Anſwer 84 men . 7

54)15440(287
108

474
432

420
378

42

Note, if you would work ſuch queſtions of the double rule of three as have one of their proportions indirect, by one ſtating ; you muſt multiply the third number of your ſtating, by that number you would otherwiſe have placed under your firſt ; and your firſt number by that you would have placed under the third ; as in the following example.

EXAMPLE.

Acres	Men	Acres	
If 54	37	420	The number of days
†17		5	which have relation to the
			54 acres

378
54

9.8

2100
37

14700
6300

† The number of days which have relation to 420 acres

918) 77700(84 Men anſwer, as before
7344

4260
3672

588

Of EXCHANGE.

HAving explained the nature of the Rule of Three, and the manner of resolving questions therein, I am naturally led to treat of its particular use in the exchange of coins

In the exchange of coins, it is necessary that the par or value of the money in each place be exactly known: for the word par signifies to equalize the money of exchange from one place to that of another place. As when I take up so much money per exchange in one place to pay the just value thereof in another kind of money in another place, without having respect to the price current of exchange for the same, but only to what the money does currently pass for in each place. From whence may be easily found out the profit and loss of all monies drawn or remitted by exchange. But this par being grounded principally upon the current value of coin, the plenty and scarcity thereof, the rising and falling. inhancement and debasing of the same, it must necessarily follow, that the value of coin is subject to change. An example whereof you have in France, where their coin has been changed, inhanced and lowered, several times in a few years, and in the year 1720, the French crown, which was sixty sous or three livres, is now raised to seventy five sous, or three livers; fifteen sous.

The denomination in which England, and the following places each with each other are, viz.

The exchange of monies from London to Antwerp, Amsterdam, Hamburgh, Lisle, Middleburgh, and other parts of Flanders and Holland, is valued on the pound sterling of 20 shillings: that is, to pay after the rate of so many shillings and pence, Flemish, for every pound sterling.

The exchange from London to Paris, Roan and most parts of France, is valued on the French crown at 54d. that is, to pay so many pence or so many shillings and pence sterling, for the French crown

The exchange from London to Venice is made on the ducat at 52d. sterling, to pay so many pence and parts of a penny sterling for every ducat.

The exchange from London to Leghorn, Genoa, Calais, Madrid and other parts of Spain, is made on the dollar or piece of eight, at 54d ſterling, that is, to pay ſo many pence or parts of a penny ſterling for every dollar.

The par at Antwerp, Amſterdam, Hamburgh, Liſle, Middleburgh, and other parts of Flanders, with one pound ſterling, is thirty three ſhillings four pence Flemiſh, for a pound ſterling; which thirty three ſhillings four pence, do make 10 guilders, at two ſhillings ſterling the guilder, or 10 livres Turnois.

The par at Paris, Roan, and other parts of France, has been reckoned ſometimes at 71 ſous the crown of 3 livres Turnois, generally at 60 ſous the crown of 3 livres, every livre valued at 1 ſhilling ſixpence ſterling, the crown valued at 4s 6d ſterling.

The par at Leghorn, Madrid, Calais, Genoa, is at 54 pence ſterling for the dollar or piece of eight.

The par at Venice with our ſterling money is at 6 livres, 4 ſous of Venice per ducat, or 51 pence ſterling, ſometimes 52 pence.

The Hamburgh par is ſometimes reckoned at 4 rix dollars and a half, which makes 32 ſhillings Flemiſh for 20 ſhillings ſterling.

The par at Liſbon is at 6s. 8½d on the milrea or 1000 reas.

The par at Oporto is the ſame as that at Liſbon

The value of the moſt uſual coins with which England does chiefly exchange, are, viz.

		Sterling money. s	d
Holland and Flanders.	1 Stiver	0	1 1/5
	6 Stivers is 1 ſhilling Flemiſh	0	7 1/5
	1 Flemiſh ſhilling	0	8
	20 ſtivers is 1 guilder, or	2	0
	6 Guilders, 1 pound Flemiſh, 20s. is	12	0
	33 Shillings 4d Flemiſh	20	0
	1 Zealand common dollar	3	0
	1 Duccatoon	5	6
	1 Specie dollar	5	0

		Sterling money. s.	d.
France.	12 deniers, or 1 ſoluz	0	$3\frac{3}{5}$
	20 Soluz, or livre	1	6
	3 Livres, or a French crown	4	6

		s.	d.
Spaniſh money.	$13\frac{77}{100}$ Malvadees	0	$0\frac{1}{4}$
	372 Malvadees, or 1 royal	0	$6\frac{3}{4}$
	$\frac{20}{17}$ Royals is 1 ducat	4	4
	8 Royal piece of copper	4	6
	1 Royal copper	3	0
	$17\frac{1}{3}$ ditto is 1 piece of eight, or	4	6

		s.	d.
Portug.	$12\frac{1}{2}$ Reas of Portugal	0	1
	1 Milrea, or 1000 reas	6	$8\frac{1}{2}$
	1 Teſtoon	1	3

		s.	d.
Italy.	1 Livre at Leghorn	0	9
	1 Crown current at Florence	5	3
	1 Ducat du banco at Venice	4	4
	1 St Mark	2	10
	1 Palermo florin	2	6

		s.	d.
Germany.	1 Rix dollar of the empire	4	$5\frac{3}{4}$
	$4\frac{1}{4}$ Rix-dollars make 32s. Flemiſh at Hamburgh, &c.	20	0
	1 Guilder of Noremburgh	7	1

A merchant in London remits to Rotterdam 375 l. 10s. ſterling, at 34s. 8d. for 20s. ſterling, How many guilders Flemiſh muſt be paid at Rotterdam, and what is gained per exchange?

s.	d.	d.		l.	s.	d.
20	34	8	Flemiſh	What 375	10	0
	12			20		
	416			7510		
				416		
				45060		
				7510		
				30040		
			Guilders, ſtivers.	20)3124160		
				2)156208		
			Anſw. 3905—4	20)781014		
				3905		

To find the gain or loſs in one pound, ſubtract 33 s. 4d, out of 34s. 8d. the courſe of exchange, the difference is 1s. 4d. Flemiſh per pound, and ſo much gain is the courſe of exchange in our favour.

If the courſe of exchange be under par, it muſt by parity of reaſon become a loſs to us, and then the courſe of exchange it to our prejudice.

The like to be obſerved for the coins exchanged in all other countries.

I will give but one example of loſs by exchange, by which, with the foregoing example of gain, the ingenious may with eaſe, travel thro' the general courſe of exchange with all countries.

A merchant in London remits a bill of exchange to Amſterdam for 2671. 15s. ſterling, at 31s. 3d. Flemiſh for 20s. ſterling. I demand how much Flemiſh money was paid for the ſaid bill at Amſterdam, and what is loſt per pound by exchange?

s.	s.	d.		l.	s.
20	31	3	Flemiſh	267	15 ſterling
			Guil. Shill.		

Anſwer. 2791—8 paid, and 2 s. 1 d. Flemiſh per pound loſt by the exchange.

Arithmetical Progreſſion

IS when a rank or ſeries of numbers differ orderly from one another, by ſome common number.

To find the ſum of any arithmetical progreſſion, add the firſt and laſt numbers together, and multiply that ſum by half the number of places, and that product is the ſum. But if the number of places be odd, multiply the ſaid number of places by half of the firſt and laſt added, and that product is the ſum.

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16.

What the ſum?

16 Laſt
1 Firſt

17 Sum
8 Half of the number of places

136 Sum of the whole

Suppoſe a man hireth a room for a year, and agreeth to pay the firſt week 5d. the ſecond week 9d. and for the third week 13d. ſo paying every week 4d. more until 52 weeks or a year is finiſhed, I demand what the rent will come to?

Anſwer 23l. 3s. 8d.

Here you are to conſider that the common increaſing number is 4d. ſo that the laſt week muſt amount to 51 times 4 added to the pay of the firſt week, which is 5d. then will the laſt week come to 209 pence, then work as in the example.

51
4

Product 204
5

Added 209 the laſt week
5 the firſt week

Added 214
26 half the weeks in a year

1284
428

Pence 5564

12)5564(463s.
48

76
72

44
36

8d.

210)4613(23l. 3s. 8d.

Geometrical Progreſſion.

SUppoſe one ſold 12 ells of cloth, to receive for the firſt ell 1 d. the ſecond 2 d. the third 4d. and ſoon doubling, what is paid for the 12 ells?

0, 1, 2, 3, 4, 5, 6.
1, 2, 4, 8, 16, 32, 64.

32

128
192

2084

2

Anſwer 4097 Pence.

Note, That if this queſtion had been for a farthing a button, or the like, the anſwer would have been farthings.

Suppoſe one ſold a horſe having 4 ſhoes, and every ſhoe 6 nails, to receive for the firſt nail 1 farthing, the ſecond nail 2 farthings, the third nail a penny, and ſo

doubling, how much is paid for the laſt nail, and the price of the horſe? Anſwer 17476*l.* 5*s.*

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12,
1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024 2048, 4096

4096

12288
18432
81920

8388608
2

16777216 far.

Or if this queſtion had been of a coat ſold at a barley corn a button, and ſo doubling to 24 buttons (accounting 900 corns to a pint) I divide the 16777216 by the 900 corns, the quotient gives about 11641 pints, which divided by 64 (the pints in a buſhel) the quotient gives about 262 buſhels, or about 36 quarters of barley for the coat.

The Rule of Fellowſhip or Company

MAY fitly be divided into gain, loſs, and time.

A general Rule,
As general ſtock to general profit bears;
So each man's ſtock in general profit ſhares.

That is to ſay,

Every man's particular ſtock being added together, the total muſt be the firſt number in the rule of three, the gains the ſecond, and every man's particular ſtock the third; as,

Suppoſe two bookſellers in company, Y laid in 20*l.* Z laid in 40*l.* whereby was gained 50*l.* what is each man's part of the gain?

Y 20
Z 40
60

If 60l gain 50l, what will 20l gain?

20

610)10010(16l 13s 4d
6

40
36

4

If 60l gain 50l, what will 40l gain?

40

610)20010(33l 6s 8d
18

20
18

2

	l	s	d
	33	06	8
	16	13	4
Proof	50	00	0

Suppose two merchants made a ſtock, B laid in 45l. and C laid in 68l. whereby they gained 32l. how muſt the gain be divided?

If 113l gain 32l, what will 45l gain?

B 45
C 68
113

45

160
128

113)1440(12l $\frac{84}{113}$ B's part
113

310
226

84

If 113l gain 32l, what will 68l gain?

68

256
193

113)2176(19l $\frac{20}{113}$ C's part
113

1046
1027

29

The 29 of the fraction multiplied by 20, the pence in 20s. and the product divided by 113, the quotient tells the pence.

Suppose three merchants F, G and C, join their monies to make a stock of 25000l. of which F laid 10000l. G 8000l, and C 7000l, with this, after a certain time of trading, they gained 7500l, how must this be parted?

If 25000 gain 7500l, what will 10000l gain

10000

25|000)75000|000(3000l. F's part
75

0000

If 25000l gain 7500l, what will 8000l gain?

8000

25|000)60|0000(2400l G's part
50

100
100

00

If 25000l gain 7500l, what will 7000l gain?

7000

25|000)5250001000(2100l C's part
50 F 3000
G 2400 } Stocks added.
25 C 2100
25
7,00
0

The Rule of Fellowship with Time.

The Rule.

EVERY man's ſtock muſt be multiplied by his time, and the total of theſe products added together, is the firſt number, the gain or loſs the ſecond number, and the product of every man's particular ſtock and time the third number.

Suppoſe two merchants in company, A laid 100l for 4 months, B put in 136l for 3 months, and they gained 50l, what is each man's part?

A put in 100l
B put in 136l } multiplied by { 4 / 3 } give { 400 / 408

808

If 808l gain 50l, what will 408l gain?

400l

808)20000(24l $\frac{608}{808}$ A's gain?
1616

3840
3222

608

If 808l gain 50l, what will 408l gain?

408

400
2000

808)20400(25l $\frac{200}{808}$ B's part.
1616

4240
4040

200

Suppose three farmers, as A, B and C hold a pasture, for which they pay 45l per annum, A hath 24 oxen 32 days, B hath 12 48 days, and C fed 16 oxen there 49 days, what must every man pay of the rent?

Oxen		Days		
A 24		32		768
B 12	multiplied by	48	give	576
C 16		49		384
				1728

RULES of PRACTCE.

The even parts

Of a pound			Of a shill.			Of a hund.	
s	d	l	d	s	lb	C
10	0	$\frac{1}{2}$	6	$\frac{1}{2}$	56	$\frac{1}{2}$
6	8	$\frac{1}{3}$	4	$\frac{1}{3}$	84	$\frac{1}{3}$
5	0	$\frac{1}{4}$	3	$\frac{1}{4}$	28	$\frac{1}{4}$
4	0	$\frac{1}{5}$	2	$\frac{1}{6}$	16	$\frac{1}{7}$
3	4	$\frac{1}{6}$	$1\frac{1}{2}$	$\frac{1}{8}$	14	$\frac{1}{8}$
2	6	$\frac{1}{8}$	1	$\frac{1}{12}$	8	$\frac{1}{14}$
2	0	$\frac{1}{10}$			7	$\frac{1}{16}$
1	8	$\frac{1}{12}$				

1. When the given price is pence, take your parts in ſhillings, the product divided by 20 gives the anſwer in pounds.

Or, You may bring it into pounds, at once, by cuting off the laſt figure, and by conſidering that 240 pence is 1 pound, whereof 8d is $\frac{1}{3\,7}$ 6d is $\frac{1}{4\,0}$ 4d is $\frac{1}{6\,0}$ 3d is $\frac{1}{8\,0}$ 2d is $\frac{1}{1\,2\,0}$.

EXAMPLES.

	254 lb of tobacco at 1d				716 ells at 3d		
				d		s	d
$\frac{1}{2\,1}$	2	11	2d	$3\frac{1}{8\,0}$	L8	19	0 facit
L.	1	1	2 facit		215 lb at 4d		
	254 lb at 2d			d			
				$4\frac{1}{6\,0}$	L3	11	8 facit
$\frac{1}{6}$	42	2		d			
				$6\frac{1}{4\,0}$	643 gall at 6d		
						s	d
L	2	2	4 facit		L 16	1	6

The three laſt examples are brought into pounds at one operation, after which manner any ſum of practice may be readily caſt up.

Here you may ſee that 254 pounds of tobacco at 1d a pound, divided by the $\frac{1}{2\,1}$, gives 21s 2d, and that divided by 20, by cutting off the laſt figure, and taking $\frac{1}{2}$ of it, gives 11 1s 2d, the price of 254 pounds of tobacco: and for 2d the pound take the $\frac{1}{6}$ becauſe 2d is the $\frac{1}{6}$ part of a ſhilling and for 3d a pound take $\frac{1}{4}$, and ſo for the others at 4d and 6d.

2. When the given price is ſuch pence as are no even part of a ſhilling, take firſt the greateſt even part of a ſhilling, and then part of that part: add them together, and divide the product by 20, or cut off the laſt figure, and take $\frac{1}{2}$.

d	2121 ells at 5 d
4	707 s
1	176—9
5	883—9
	44—3—9 facit

748 lb at 4d	
6d is $\frac{1}{2}$ or	374
of which 1d, or $\frac{1}{6}$ is	62—4
	436
	L 21—16—4

254 lb of tobacco at 9d and 10$\frac{3}{4}$ a pound

d		
6	$\frac{1}{2}$	127
3	$\frac{1}{3}$	63—6
9	$\frac{1}{2}$	190—6
		9—10—6 facit

254 at 10$\frac{3}{4}$d	
127	shillings in 254 6d
84	—8 in 254 groats
10	—7— in 254 halfpence
5	—3$\frac{1}{2}$ in 254 farthings
2217	—6$\frac{1}{2}$
11	—7—6$\frac{1}{2}$ facit

Demonſtration. In 254 pounds of tobacco at 10$\frac{3}{4}$d a pound, there muſt be 254 ſixpences, which is 127 ſhillings, and 254 groats, which is 84s 8d, and 254 halfpence, which is 10s 7d, and 254 farthings, which is 5s 3$\frac{1}{2}$d, all theſe added together, make 227s 6$\frac{1}{2}$d, which divided by 20, gives the anſwer 11l 7s 6$\frac{1}{2}$d.

d		614 lb at 11 d
6		307
4	$\frac{1}{2}$	204—8d
1	$\frac{1}{3}$	51—2
	$\frac{1}{4}$	
11		5612—10
		2—2—10 fa.

		563 lb at 11$\frac{1}{2}$d
6	$\frac{1}{2}$	281—6d
4	$\frac{3}{4}$	187—8
1	$\frac{1}{4}$	70—4
		5319—6$\frac{1}{2}$
		67—19—6$\frac{1}{2}$ facit

3. If the given price be any number of pence above 1s, and leſs than 2s, take the aliquot parts in pence, as in the laſt precedent, to which add the given quantity for 1s, and proceed as before.

EXAMPLES.

d

	254 lb at 15d
½	63—6
	3117—6
	15—17—6 facit

	254 lb. at 17d
½	84—8
¼	21—2
	3519—10
	17—19—10 facit

	264 yds at 18d
½	132
	3916
	19—16—0 facit

	295 gallons at 19d
½	147—6
⅛	24—7
	617—1
	23—7—1 facit

	672 lb at 22¾d
½	336
⅓	224
⅛	42
	12714
	63—14—0 facit

	426 ells at 25½d
½	228
⅓	152
¼	38
½	9—6
	8813—5
	44—3—6 facit

In 672 lb at 22¾d a lb I take ½ for 6d. the ⅓ for 4d. and the ⅛ for the ¾, because ¾ is the ⅛ of 6d, by which you will find that in 572 sixpences there is 336 shillings, and in 672 groats there is 224 shillings, and in 672 three farthings there are 42 shillings.

4. If the given price be such shillings as are an even part of a pound sterling, take such a part of the given quantity, and the quotient is pounds.

	Ells s d
	433 at 1—8
1/21	36—1—0 facit
	674 at 2s 6d
½	84—5—0 facit

	Yards
	271 at 2s
1/10	27—2—0 facit
	495 at 3s 6d
⅐	82—10—0 facit

	Crowns		Dollars
	457 at 5 s		612 at 4 s
¼	114 5 0 facit	5	122 8 0 facit
	295 at 6 s 8 d		372 at 10 s
⅕	98 6 8 facit	⅕	186 0 0 facit

In this first example of 433 ells at 1 s 8 d, I take the $\frac{3}{12}$ because 1 s 8 d is the $\frac{1}{12}$ of 1 l, and say, 12 in 48 is 3 times, rest 7, which makes the 3 to be 73, then 12 in 73 is 6 times, rest 1, which is 1 s 8d, I put down as above.

5. If the given price be such shillings and pence as are no even parts of a pound, multiply the given quantity by the number of shillings, and take the aliquot parts in pence, and proceed according to the second rule.

Ells

	375 at 8 s 6 d
	8
	3000
½	187 6
	3101 8 6
	159 7 6

Ells

	493 at 15 s 10 d
	15
	2465
	493
½	246 6 d
⅓	164 4 d
	7301 5 10
	390 5 10 facit

	C	s	d
	295 at	12	9
	12		
	3540		
½	47	6	
½ ⅓	73	9	
	2761	3	
	1891	3 fa.	

	C	s	d	
	214 at	7	4	
	7			
	1498			
½	107			
½ ½	53	6		
⅓	35	8		
	1691	4	2	
	84	14	2	facit

6 If your given price be any number of pounds, shillings and pence; reduce first your pounds and shillings into shillings, and proceed according to the last rule.

Pieces	l	s	d
754 at	4	3	7
83	20		
2262	83		
6032			
377			
62 10			
63021	1 10		
4151	1 10		

Tuns	l	s	d
176 at	3	7	10
67	20		
1232	67		
1056			
11792			
88			
58		8	
11938		8	
596	18	8 facit	

7. If your given price be any number of pounds, and exceeding five pounds, then multiply your given quantity by the number of pounds, and take your aliquot parts in shillings and pence, viz.

		C	l	s	d
		74 at	11	12	6
		14			
		814			
s.	½	36			
10	¼				
2½		9	5	0	
		360	5	0	facit

	Hhds	l	s	d
	394 at	16	16	3
	16			
	2364 } at 16l			
	394 }			
	197 at 10s			
	98 10 at 5			
½	19 14 at 1			
¼	5 18 6 at 3d			
l.	6624	0	6 facit	

8. If the given quantity be any number of C. qrs. or pounds or tuns, C. qrs. or pounds, &c. work as before where no part is, and take your aliquot parts in quarters and pounds, or in C. qrs. and pounds, and add them to your first work. An example or two will make this plain.

C		s	d		C		s	d
7	½ at	22	6		6	¾ at	12	10
22					12 mul.			
156					756 s			
50				½	31	6d		
37	6				21			
11	3			¼	9	7½	C	
				⅛				
169	18	9			318	1	Sum	
84	18	9	facit		40	18	1½	

In the example of 6 ¾ C by 12s 10d the C weight, I multiply the C by 12s, and take the parts in pence for the odd pence; then for the ¾ of C I first take the ½ of the price of a C, and that makes 6s 5d, the price of ½ a C, and then I take the half of that, which gives 3s 2½d the prime of a qr of a C. Add them together it gives the price of ¾ of a C, which is 9s 7½, and must be added to your first work. Two or three examples more will make it familiar and easy to any capacity.

84 C 3 qrs 11 lb at				£	1s	10d
21						
84				½	10	11
168				11 ¼	5	5 ½
42				7 ¼	1	4 ¼
28				4 ⅐	0	9 ¼
18	6				18	6
1851	2	6		The price of 3 qrs 11 lb		
92	12	6				

Tun	C	qr	lb		l	s	d	
12	14	3	14	at	15	17	06	a tun

12

190	10	00	
½ 7	18	9	
¼ 3	3	6	
⅛ 1	7	11	½
1/16 0	3	1	¼
1/32 0	1	11	½
202	06	0	¼

The Order of deducting Tare and Tret.

GRoſs is the weight of a commodity, with the hogſhead cheſt, box, or whatever elſe contains it.

Tare is the allowance given for the weight of the cask, hogſhead, &c.

Tret is an allowance of 4 pounds in 104 pounds, for waſte and duſt on ſome ſort of goods.

Example 11 hhds. qt. 14 ℔

C qr lb lb lb
45 3 15 groſs, tare 14 per 112
how many lb neat?
5 2 26 tare

Anſwer 40 0 17

1. Here 14 pounds tare being ⅛ of 112 pounds, take ⅛ of the groſs, the quotient gives the whole tare, which ſubtract from the groſs, gives the neat weight.

The operation is performed thus: divide the groſs by 8, ſay 8 in 45, 5 times, and 5 C remains, which is 20 qrs, and 3 is 23: then 8 in 23, 2 times, 7 qrs remain, which turned into pounds by 28, and added to the 15 pounds, make 211 pounds, then 8 in 211 is 26 times. So the tare is 5 C, 2 qrs, 26 pounds.

	C	qr	lb
Example	40	0	17
	22		
	80		
	80		
	20		
	0	3	$4\frac{5}{7}$
	90	10	3 $4\frac{5}{7}$
L.	45	3	$4\frac{5}{7}$

	s	d
Neat at	22	6

lb			
$14\frac{5}{8}$	2	9	$1\frac{1}{4}$
$2\frac{4}{7}$	0	4	$\frac{3}{4}$
$1\frac{5}{8}$	0	2	$\frac{1}{4}$
facit	3	4	$\frac{3}{4}$

price of 17 lb

If the tare be 16 pounds in 112 pounds, take $\frac{1}{7}$ of the groſs, and work as before.

If 18 pounds per 112 pounds, for tare, take the aliquot parts, viz.

For 16 lb take the $\frac{1}{7}$ } Add the tare of 16, and the
For 2 take the $\frac{1}{8}$ } tare of 2 together, the total ſubtract from the groſs, and work as before.

lb lb
If 20 in 112 for tare } for 16 lb take $\frac{1}{7}$ / for 4 take $\frac{1}{4}$ of 16

2. When an allowance is made for tret, then (after the tare is ſubtracted from the groſs) the remainder is called ſuttle, which divide by 26 (becauſe 4 pounds is the 26th part of 104, the allowance always given for tret) the quotient gives the tret, which ſubtracted from the ſuttle, gives the neat weight.

	C	qr	lb		lb	lb	lb	lb
Example.	45	3	15	gr. tare	16 in	112 tret	4 in	104
	16 1/7	0	2	06 tare				
	59	1	09	ſuttle			4)104	
	4							26
	157							
	28							
	1265							
	324							
	4405	pounds ſuttle					26)4405	
	169	tret					—180	
	4236	neat pounds, at 6d					169 245	
	C 1/7	21	18	s				1 F
L	105	10	0	facit				

3. If the allowance for tare be 8 pounds, 10 pounds, 12 pounds, in 112, or any other leſſer number, whether an aliquot part of 112 or not, in ſuch caſes, divide the groſs into two parts by 2, which will make it half hundreds, then ſay, 8 is 1/7 of 1 1/2 C. or 12 pounds, in 112 pounds.

Rule. From 1/8 of the groſs, take 1/7 of that 8th for tare at 12 per cent. When you have found tare, ſubtract it always out of the whole groſs.

I might enumerate examples, but theſe being ſufficient to inſtruct any ordinary capacity in tare and tret,

I ſhall proceed to ſhew ſome other abbreviated ways of caſting up goods and merchandize.

For retailers of ſmall parcels, as mercers, linnen and woollen drappers, haberdaſhers of hats, &c.

THE moſt abbreviate and ready way is, to multiply the price by the quantity.

Example. Sold 7 yards of cloth, at 14s 6d a yard.

7

Anſ. L. 5—1—6

Say 7 times 4 is 42, which is 3s 6d, ſet down 6 pence and carry 3 ſhillings to the place of ſhillings, and ſay, 7 times 4 is 28, and 3 I carry is 31, ſet down 1s, and carry 3 angels to the place of tens of ſhillings, and ſay, 7 times 1 is 7, and 3 I carry is 10 angels, which is 5l. fix the 5l in the place of pounds: ſo the price of 7 yards is 5l 1s 6d.

Example. Sold 11 yards and $\frac{1}{2}$ at 23s 3d.

11.

L. 7—5—9
the $\frac{1}{2}$ yard 5—7$\frac{1}{2}$

Anſ. L. 7 12 4$\frac{1}{2}$

For half a yard, take half of 23s 3d and add to the product of 11 yards.

Object. There are many numbers under 100 that are not included in the multiplication table, or being multiplied together, will not produce the given quantity: and ſo conſequently cannot be done by this new way of practice.

Anſ. It is very true, there are ſeveral numbers under 100, that no two numbers multiplied together can produce them, ſuch as 13, 17, 19, 25, 29, 31, 33, 37, and many more.

Rule. In ſuch caſes, multiply by two ſuch numbers, as being multiplied together will come neareſt to ſuch odd numbers; then multiply the price by that part which wants to make up the given quantity. An example of which follows.

		s	d
Example, 29 ells at		7	9
			7
	2	14	3
			4
	10	17	0
		7	9
Anſ.	11	04	9

Here I multiply by 7 and 4, becauſe 7 times 4 is 28, and for the odd ell to make it 29, I add the price of the ell to the product.

Anſ. 11l 4s 9d

FRACTIONS

Are of two kinds { VULGAR. and DECIMAL.

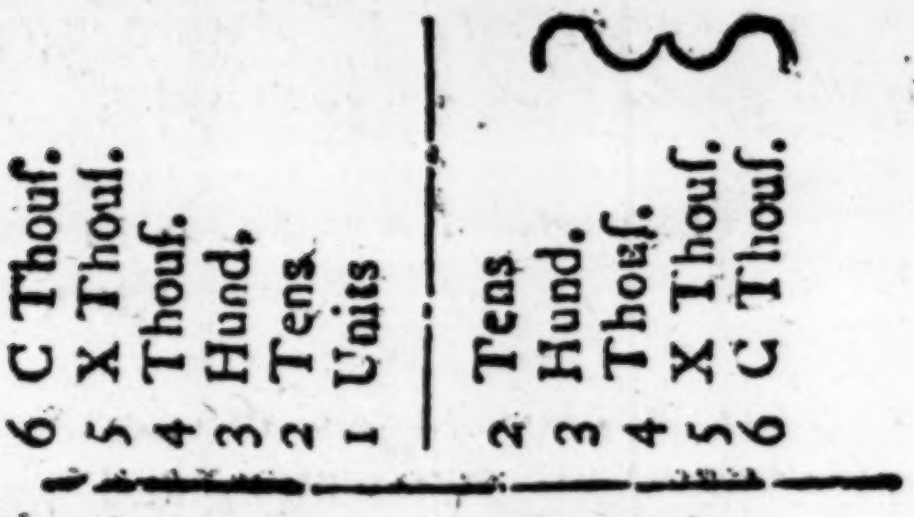
A Vulgar fraction is cauſed by diviſion of whole numbers, the remainder of which being leſs than the diviſor called the numerator, is always the dividend, and the denominator is the diviſor.

3 Numerator.
4 Denominator.

A decimal fraction is ſuch a one, whoſe denominator is underſtood, and therefore need not be expreſſed: and is an unit with as many cyphers following it, as there be figures and cyphers in the numerator.

Decimal fractions, whether they ſtand alone, or be joined with integers, have always a comma or point before them to diſtinguiſh them from integers, as, 5,560042

In decimals the value of every figure or cypher decreaſes by a tenfold proportion from the units place towards the right hand, as the whole numbers do increaſe the value towards the left hand, by the like proportion, as you may ſee in the following table.



Cyphers before integers, and at the end, or right hand of decimals are of no value; but after integers, and before decimals they have their value; for in integers they increaſe, and in decimals they diminiſh the value of the other figures joined with them.

The integers, 005 is but 5, and 004 is but 4, and 06 is but 6.

But in decimals, ,005 is $\frac{5}{1000}$ and ,004 is $\frac{4}{1000}$, and ,06 is $\frac{6}{100}$.

And again, in integers 500 is five hundred, and 400 is four hundred:

In decimals 500 is but 5, and 400 is but 4, &c.

Next to abbreviation and valuation of vulgar fractions, there is little required but to know how to bring a fraction of a leſſer name into a fraction of a greater name, and to reduce fractions of divers unequal denominators to one common denominator, which being well underſtood, you may with as much eaſe add, ſubtract multiply and divide a fraction as you can a whole number.

In decimals a fraction is ſeldom abbreviated: therefore,

1. To abbreviate any vulgar fractions, find ſuch a number for dividing both the numerator and denominator thereof ſo, that no remainder be on either of the diviſions

Example. Abbreviate $\frac{96}{120}$ into $\frac{4}{5}$ its loweſt term.

Say, 12 in 96, 8 times, and 12 in 120, 10. then the fraction is $\frac{8}{10}$; then ſay, 2 in 8, 4 times and 2 in 10, 5 times, then the fraction is $\frac{4}{5}$, ſo that 4 is to 5, as 96 is to 120.

2. To know what part of a pound ſterling any number of ſhillings and pence is, bring the ſhillings and pence

into pence for a numerator, and place 240 under it (the pence of one pound) for a denominator.

Example. What part of a pound is 11s 3d?

Facit $\frac{135}{240}$

3. To reduce vulgar fractions into decimals, Add cyphers at pleasure to the numerator, and divide by the denominator. Example, viz.

Reduce 11s 3d into a decimal fraction.

12	2410	1350000
135		150
——Numer. facit	5625	120
240		——
	0

Or, $\frac{5625}{100000}$, or, 5625

Example. Reduce $\frac{4}{5}$ into a decimal fraction.

5) 4000

,800

Or rather .8 Facit ,800

4. To value a vulgar fraction, Multiply the integer into the numerator, and divide by the denominator.

What is the $\frac{5}{8}$ of a pound sterling?

20

5

8) 100

4

84d

s d

12——6

Facit.

s d

An ell worth 7——8 what is $\frac{2}{5}$ worth?

2

5) 15——6

facit 3——1 $\frac{1}{2}$

5. To value a mixt number, Multiply the mixt number by the numerator, and divide by the denominator. Example.

l *s* *d*

A ſhip worth 94—11—9, what is $\frac{5}{8}$ worth?

5

8) 3972—17—9

facit 496—12—$4\frac{1}{8}$

6. To value a decimal fraction, expreſſing coin; every prime or unit in the firſt place is 1*s* value; every 5 in the ſecond place 1*s*. and the reſt farthings; but if they exceed $1\frac{25}{100}$ there muſt be one farthing abated.

Reduce $\frac{7}{9}$ of a pound into a decimal fraction.

9),700000

,77777

Here 7 primes is 14*s* and 5 taken out of the ſecond place is 1*s*, which makes 15*s*, then 2 remains, which is 27 to the thirds, or place of farthings, out of which abate 1 for $1\frac{25}{100}$, it makes 15*s* $6\frac{1}{2}$*d*, which is the $\frac{7}{9}$ of a pound ſterling.

7. To reduce vulgar fractions to a common denominator, Multiply the numerator of each fraction into every denominator, except its own, which makes the product of a new numerator; than multiply all the denominators together, and that product is one common denominator to all the new numerators. Example.

Reduce $\frac{2}{3}l$ and $\frac{3}{4}l$ to a common denominator.

Facit $\frac{8}{12}$ and $\frac{9}{12}$.

Here 12 is the common denominator to both the new numerators, viz. 8 and 9, and you find that 8 is to 12 as 2 to 3, and 9 is to 12, as 3 to 4.

So that $\frac{8}{12}$ is to $\frac{2}{3}$, $\frac{9}{12}$ to $\frac{3}{4}$.

Reducee $\frac{3}{4}$, and $\frac{5}{6}$, and $\frac{7}{8}$ of a pound to a common denominator.

To prove your work, Divide your new numerator by the numerator of that fraction, and divide the common denominator of the fraction by the denominator, if both quotients are equal, your work is true

4			
6	18	40	42
—		4	4
24	—	—	—
8	144	160	168
192	192	192	192

Exam. $\frac{144}{192}$, is $\frac{48}{48}$ here divided by 3, make 48, and 192 divided by 4, gives 48, which was to be proved Or, you may prove your work of abbreviation of fractions; but it is attended with much difficulty, where 4 or more fractions are reduced to a common denominator.

Now this reduction of fractions is of little use otherwise than to prepare a fraction to be either added, subtracted, multiplied, or divided.

As if the $\frac{3}{4}$ and $\frac{5}{6}$ and $\frac{7}{8}$ were to be added together, reduce them first into a common denominator, as in the last rule, it makes $\frac{144}{192}$ and $\frac{160}{192}$ and $\frac{168}{192}$. Add all the new numerators together, make 472, which divided by 192, the common denominator, makes 2 $\frac{88}{192}$ as in the following example.

Addition of Vulgar Fractions.

144
160
168

192)472
2) 88

l s d

Facit $2\frac{88}{192}$ or 9—2

And if the $\frac{3}{4}$ and $\frac{5}{6}$ and $\frac{7}{8}$ were to be added together in decimals, reduce them first into decimal fractions, according to the third rule, and the operation stands, viz.

0000

Addition of Decimals.

$\frac{3}{4}$	,75
$\frac{5}{6}$	,8333
$\frac{7}{8}$	,875

Say, 4 in 30 is 7 times and 4 in 20 is 5 times; and so for the rest.

l s d

Facit 2 ,4583, or, 2 9 2

By this addition you see how much less work is made by decimals than in vulgar fractions, and how easy their value is found out according to the sixth rule.

8. To reduce the compound fractions, or fractions of a lesser name into the fractions of a greater, multiply the numerators together for a new numerator, and the denominators multiply together for a new denominator.

Reduce $\frac{1}{4}$ of a penny into the proper fraction of a pound sterling.

Say $\frac{3}{4}$ of $\frac{1}{12}$, of $\frac{1}{20}$, or $\frac{1}{4}$ of $\frac{1}{240}$ fac't $\frac{3}{960}$.

9. To reduce a mixt number of a lesser name into the fractions of a greater, Reduce the mixt number into an improper fraction, and work as before.

Reduce $3\frac{1}{2}d$ into the proper fraction of a pound sterling.

$\frac{7}{2}$ of $\frac{1}{12}$ of $\frac{1}{20}$ or $\frac{7}{2}$ of $\frac{1}{240}$, facit $\frac{7}{480}$.

By the same rule you may reduce any sort of weights or measure.

For compound fractions, their use is chiefly to bring fractions of divers denominations to one and the same denomination

As if the $\frac{3}{4}$ of a penny, $\frac{2}{3}$ of a shilling, and $\frac{7}{8}$ of a pound were added together.

The $\frac{3}{4}$ of a penny must be reduced into the fraction of a pound, and the $\frac{2}{3}$ of a shilling, must be reduced into the fraction of a pound, thus:

$\frac{3}{4}$ of $\frac{1}{240}$ fac. $\frac{3}{960}$
$\frac{2}{3}$ of $\frac{1}{20}$ fac. $\frac{1}{60}$

} Then the fractions to be added are $\frac{3}{960}$, and $\frac{2}{60}$ and $\frac{7}{8}$ which reduce to a common denominator, and add them together, either by decimals or vulgar fractions.

Addition of Fractions.

1. IF the fractions to be added have one common denominator, add all the numerators together, and divide the product by the common denominator.

Example. Add $\left\{\begin{matrix}\frac{8}{12}\\ \frac{5}{12}\\ \frac{7}{12}\end{matrix}\right\}$ of a pound together.

12) 20
Facit $1\frac{8}{12}$

2. If the fractions to be added be of different denominators, reduce them to a common denominator, and proceed as before.

Example. Add $\frac{7}{8}$ and $\frac{3}{4}$ and $\frac{2}{3}$ together.

8	—	—	8	84
4	28	24	8	72
—	3	3	—	64
32	—	—	$\frac{64}{96}$	—
3	84	72	96	220
—	—	—	—	—
96	96	96	Facit	$2\frac{28}{96}$

To add $\frac{7}{8}$ and $\frac{3}{4}$ and $\frac{2}{3}$ of a pound in decimals, reduce them into decimal fractions, and add them up as in whole numbers, keeping the place of units just under each other.

Add $\left\{\begin{matrix}\frac{7}{8} ,875\\ \frac{3}{4} ,75\\ \frac{2}{3} ,6666\end{matrix}\right.$

2,2916

l s d
Facit 5—4—10

8)71000
,875
4) 3000
75
3) 20000
6666

Subtraction of Fractions.

1. TO subtract fractions of different denominators, reduce them to a common denominator, and subtract the leſſer fraction from the greater.

Example. From $\frac{1}{4}$ l. take $\frac{7}{8}$ l. from $\frac{9}{18}$ s
— — take $\frac{9}{12}$
8 —
Facit $\frac{1}{14}$

2. If you have a mixt number (or integer and fraction) and the fraction to be ſubtracted be greater than the fraction from which you are to ſubtract,

Borrow an integer from the mixt number, and work as in ſubtraction of whole numbers.

Example. From 11 $\frac{2}{3}$ $\frac{8}{12}$
Take 2 $\frac{3}{4}$ $\frac{9}{12}$
8 $\frac{11}{12}$

Here I cannot take $\frac{9}{12}$ out of $\frac{8}{12}$, therefore, I borrow an integer, viz. 12, and ſay, 9 out of 12 reſts 3, to which add $\frac{8}{12}$ reſt $\frac{11}{12}$ and carry 1 to 2, is 3 l. out of 11 l. reſt 8, and facit $\frac{11}{22}$

From 25 $\frac{8}{12}$ from 42
Take 19 $\frac{7}{12}$ take 16 $\frac{15}{24}$
Facit 1 $\frac{8}{12}$ facit 2 $\frac{9}{24}$

Subtraction of decimals is the ſame as in whole numbers, keeping the place of units juſt under each other of the integers and primes under primes of the decimals &c.

l.		l. s. d.
From $\frac{7}{8}$	875	the $\frac{7}{8}$ is —— 17 — 6
Take $\frac{3}{4}$	75	$\frac{3}{4}$ is —— 15 — 0
	s. d.	
Reſt	,125 or 2—6	Reſts 2 — 6

Equal to the Decimal ,125

Multiplication of Fractions.

1. TO multiply proper fractions, multiply the numerators together for a new numerator, and the denominators multiply together for a denominato .

Example. Multiply $\frac{7}{8}$ by $\frac{5}{4}$, facit $\frac{35}{32}$.

2. If a mixt number and a fraction are to be multiplied together, reduce the mixt number into an improper fraction, and work as in the laſt.

Example. Multiply 11 $\frac{3}{4}$ by $\frac{3}{4}$.

$\frac{35}{3}$ by $\frac{3}{4}$ facit $\frac{105}{12}$.
1. 1.

Example. Multiply 11$\frac{3}{4}$ by 2$\frac{3}{4}$

	l.	s.	d.
$\frac{35}{3}$ by $\frac{11}{4}$ fac. $\frac{385}{12}$ or	32	1	8

3. To multiply a mixt number by an integer, make the integer an improper fraction, by placing (1) under it, and reduce your mixt number into an improper fraction, and work as in the firſt rule.

Example. Multiply 7$\frac{5}{8}$ by 4

$\frac{61}{8}$ by $\frac{4}{2}$, facit $\frac{244}{8}$.

4. Multiplication of decimals is the ſame as in whole numbers, ſaving as many decimal parts as are in the multiplicand and multiplier, ſo many muſt be cut off from the product, which if it have not ſo many places, the defect muſt be ſupplied with cyphers towards the left hand.

Multiply ,1005	11 ,83
by ,631	2 ,87
1005	8281
3015	9464
	2366
Facit, 0031 155	33 ,9521

Diviſion of Fractions.

1. TO divide ſingle fractions, there is no need to reduce the fractions to a common denomination,

but multiply the numerator of the divisor by the denominator of the dividend. And contrary for the terms of the quotient thus:

Example. Divide $\frac{7}{8}$ by $\frac{3}{4}$

$\frac{3}{4}\frac{7}{8}$ ($\frac{2}{1}\frac{8}{4}$ or $1\frac{1}{6}$

2. If it happens that the fractions of the divisor be greater than the fractions of the dividend, the facit of such division is a fraction.

Example. Divide $\frac{3}{4}$ by $\frac{7}{8}$

$\frac{7}{8}$) $\frac{3}{4}$ ($\frac{2}{1}\frac{4}{8}$

Facit $\frac{1}{1}\frac{2}{4}$

3 To divide an integer by a fraction, multip'y the integer into the denominator, and divide by the numerator.

Example. Divide 8 by $\frac{5}{6}$

$\frac{5}{6}$) $\frac{8}{1}$ $\frac{4}{3}\frac{8}{3}$

$9\frac{3}{5}$ Facit.

4. To divide a fraction by an integer, place the numbers as follows, and work as by the first rule.

Example. Divide $\frac{3}{4}$ by 3

$\frac{3}{1}$) $\frac{3}{4}$ ($\frac{3}{1}\frac{3}{2}$

Facit $\frac{1}{4}$

5. To divide a mixt number by an integer, reduce the mixt number into an improper fraction, whose denominator multiply by the integer for your divisor.

Divide $3\frac{3}{8}$ by 2

$\frac{2}{8}$) $\frac{2}{1}\frac{7}{2}$ or $1\frac{1}{1}\frac{7}{6}$ facit.

6. To divide a mixt number by a fraction, reduce the mixt number into an improper fraction, and work as before.

Example. Divide $3\frac{1}{4}$ by $3\frac{4}{7}$

$\frac{4}{7}$) $\frac{15}{4}$ ($\frac{105}{16}$ facit, or $6\frac{9}{16}$

7. To divide an integer by a mixt number, reduce the mixt number and integer into improper fractions and proceed as before.

Example. Divide 5 by $3\frac{3}{5}$

$\frac{18}{5}$) $\frac{5}{1}$ ($\frac{25}{18}$ facit
Or, $1\frac{7}{18}$ facit

8. To divide a mixt number by a mixt number, reduce them into improper fractions, and divide as before.

Example. Divide $3\frac{3}{5}$ by $2\frac{2}{4}$

Or, $\frac{18}{5}$ by $\frac{10}{4}$
Facit $\frac{72}{50}$ or $1\frac{77}{55}$

Diviſion of Decimals is the ſame as in whole numbers till the work be done; and then uſe the converſe of the rule for multiplication, viz. ſo many decimals as are in the dividend, ſo many there muſt be in the diviſor and quotient; and if there be not ſo many, the quotient muſt be ſupplied with cyphers towards the left hand.

Example. Divide 33,9521 by 2,87

2,87(525
2382
Facit 11,83 86
00

See the converſe in multiplication of decimals.

The Rule of Three in Fractions.

RULE: You muſt multiply your ſecond and third numbers together, and divide by the firſt,

Obſerving the ſame method as in whole numbers, viz. That the firſt and third numbers be of one name or denomination.

Example. If $2\frac{1}{2}$ d buy $\frac{2}{3}$ lb of tobacco, What ſhall $95\frac{3}{4}$ l buy?

$\frac{7}{2}$ of $\frac{1}{480}$ l — lb — l

$\frac{7}{480}$ — $\frac{2}{4}$ — $95\frac{3}{4}$

$\frac{4}{381}$ by $\frac{2}{1}$

$\frac{766}{12}$

Divide $\frac{766}{12}$ by $\frac{7}{480}$

7 — 7680

84 — 28800

2880

3360

84) 367680

316

Facit 4377 lb of tobacco — 648

600

12

The Menſuration of plain Superficies (or flat Meaſure) ſuch as Board, Glaſs, Wainſcot, Painting, and the like.

Note 1. THat, in ſuperficial meaſure, 12 times 12 inches, being 144 inches, are the number of inches contained in a ſquare foot of ſuperficial meaſure

2. That to ſquare any number is to multiply it by itſelf, as if you would know how many ſquare feet is contained in a yard ſquare, multiply 3, the feet in one yard by 3, the product is 9, and ſo many feet make a yard ſquare.

Example. How many ſquare inches are there in a yard ſquare.

1 yard is 3 feet

12

36 inch

36

216

108

Facit 1296 inch

The general rule is to multiply the length by the breadth, and the product is the content.

Example. A board 12 feet long, and 14 inches broad, how many ſquare feet?

12

12

144

14

576

144

144)2016

576 Facit 14 ſquare feet.

CQ

Example 2. A piece of wainſcot 24 feet, 9 inches long and 11 feet deep, how many ſquare yards?

Feet.	Inch.			Yard.	Feet.	Inch.
24	9		Facit	30	3	3
11		Mul.	Or,	30	2	1½
9)272	3					

Example. A painter hath done a room, 90 feet about, and 11½ feet high, I demand the ſquare yards therein.

Feet
11, 5 High
90 About

9) 103 (115 yards for anſwer.
13
45

Note, This way 'tis done much truer and with fewer figures, and no charge to the memory.

Example. A glazier hath done a pane of glaſs of 5 feet 73, high, and 5 feet 54, broad, at 6d the foot ſquare.

Note, the glazier's foot divided into 10 parts, and every part into 10 parts more

5, 73
5, 54
2292
2865
2864

Facit feet 31,7442

A general rule to meaſure round or ſquare pillars.

Multiply the length by the circumference of round pillars.

And for ſquare pillars, add the ſides or breadth together, and multiply the total by the length.

Example. A painter hath done a pillar of 6 feet 3 inches circumference, and 14 feet 9 inches long, I demand the ſquare yards of painting?

The common and beſt way to do this, is by croſs multiplication, thus,

	Feet	Inch.
	24	—9
	6	—3
	3	—8—3
	88	6
Facit, feet	92	2 3
Or, yards	10	2 2 3

Multiplying 9 by 3, gives, 2 feet 3; put down the 3, and carry 2; then 3 times 14 is 42, and 2 is 44, which is 3 feet 8, which put down as you ſee

Then 6 times 9 is 54, which is 5 feet 6, put 6 under the 8 (as being 12ths of a foot as the 8 is) then 6 times 12 is 84, and 4 is 88. So the ſum of the 2 lines is 92 feet 2—3". Or the feet divided by 9, is 10 yards 2 feet, 2 primes (or 12ths of a foot) and 3 ſeconds or 12ths of a 12th.

The ſame is done decimally thus,

	14, 75 Feet
	6, 35
	7375
	2950
	8850
	9)92.1875
Or yards 10.	2,1875 feet

For regular polygons, add all the ſides together, and multiply the total by half the neareſt diſtance from the centre to one of the ſides.

For cones, multiply half the length by the circumference.

For pyramids, add all the breadth at the baſe together, and multiply half the length by the tota.

For globes, multiply the area of the greateſt circle by 4, it gives the content.

Menſuration of Solids.

Solids; ſuch as ſtone, timber, &c are meaſured by the cubic or ſolid foot; now a cube is a figure like a dye of 6 equal ſides, and a cubic foot contains 12 inches ſquare on every ſide.

THE rule is, multiply the length by the breadth, and that product multiplied by the depth, which divide by 1728, the cubic inches in a foot ſolid.

Example.

A piece of timber 16 foot long, 14 inches broad, and 9 inches deep, how many ſolid feet doth it contain?

12	16	
2	12	
144	192	
12	14	
1728	763	
	192	
	2688	
	9	
1728)	24192	Facit 14 Feet.
	6912	
14	000	

Example.

A ſtone 7 feet, 3 inches long, 4 feet 5 inches broad, and 2 feet 3 inches deep, how many ſolid feet?

7—3	4—5	2—3
12	12	12
87 length	53	27
53 breadth		
261		
435	1628)	124497
4611		3537
27 deep. Facit 72 solid feet		81
		refts
32277		1678
9222		Or 6''—9'''

Facit 124497 cubic inches

But the way moſt uſed, and which is ſhorter and moſt like an artiſt, is this.

Inch	Feet	
4	5	broad
2	3	deep
1	1	3
8	10	0
9	11	3
7	3	0 long
2	5	9 9
69	6	9
Feet	72	0 6 9

Only carrying the 12's both in your multiplication and addition.

To find how many inches in length make a ſolid foot of timber, multiply the number of inches ſquare in itſelf for a diviſor, and make 1728, the cubical inches of a foot your dividend.

Example.

A piece of timber 18 inches ſquare, what length will it require to make a foot ſolid?

18
18

144
18
---
324) 1728
Facit 5 inches 108

Example.

How many inches in length will make a foot, at 12 inches ſquare?

12
12
---
144)1728
——288
Facit 12 inch.

PLANK MEASURE.

A table ſhewing how many feet make a load of plank of any thickneſs.

Inch thick.	Foot to the load	Inch thick	Foot to the load
1	600	5	120
1½	400	5½	109, 112
2	300	6	100
2½	240	5½	92, 076
3	200	7	85 ,714
3½	171, 428	7½	80
4	150	8	75
4½	133 ,31	8½	70,.588

The way to make this table, or to know how many feet of plank make a load of any thickneſs.

Rule. Say, if 12 inches thick, require 50 feet to make a load: what will 4 inch thick require? This by the reverse rule of three, gives 150, as you see by the operation.

12, 50 4
12

4) 600 (150 feet for answer.

So that if you divide 600 by any thickness of plank, the quotient sheweth how many feet thereof make a load.

2 Ex. If it were required to know how many load are in 5762 feet of plank 5 inches thick.

By the table 120, feet make a load; therefore divide 5762 by 120, and the quotient is loads.

120) 5762) 48 $\frac{2}{120}$ or $\frac{1}{60}$ loads.

Or multiply the feet given by 144, and that product by the thickness of the plank, then divide by 1728 the inches in a solid foot, and the quote is feet, which divide by 50 the feet in a load, and you have the loads without the table.

5762
144

829728
5

1728) 4148640) 2400 (4 $\frac{1}{69}$ load.
6926 50)
1440

Note. The remainder $\frac{1440}{1728}$ is equal to 56 feet, and $\frac{56}{60}$ of $\frac{1}{50}$ is equal to $\frac{1}{60}$ of the load as above.

Example. In 1234 feet of 4 inches plank, how many loads and solid feet?

150) 1234 (8 load.
3) 34 (11 solid feet.

For the solid feet, divide the remainder by the number of 50's contained in the divisor; or by the times that the thickness of the plank is found in 12 as above.

Also, if the last example were done by the second rule, under the second example, 1234 multiplied by

144 gives 177696, and that by 4 inches thick, 710784, which divided by 1728, the quote is 411 feet, or 8 load (divided by 50) and 11 feet as in the laſt rule and example.

3dly, To know how many feet of plank of any thickneſs make a tun. Say by the inverſe rule of three, as 12 to 40, ſo the thickneſs to the anſwer.

12. 40 4.
12

4) 480 (120 feet in the tun

And ſo may you make a table of the feet of any thickneſs in a tun (as is before ſhewed for the load) by only dividing the 480, by the thickneſs of the plank.

So in thickneſs	Feet make a tun
of 1 inch	480
2	240
3	160
4	120
5	96
6	80, &c.

—A Short and Easy

METHOD

OF

BOOK-KEEPING.

INSTRUCTIONS.

Quest. WHat is the first thing I must do, who design to keep my books of accompts after this method.

Answer. You must make an inventory; an example of which is at the end of these instructions.

Q How must I post the first part of the inventory.

A You must post it on your ledger, viz. merchandize, to the debit of that accompt.

Cash, to the debit of your cash book.

George Mason's debt, to the debit of his accompt.

Germain Bell's debt, to his debit also.

And for the whole sum (viz. 730l.) you must give counterpart in credit of stock.

Q How must I post the other part of this inventory.

A To the credit of Thos. Richards, the sum you owe him.

To the credit of John Fair, the sum you owe him.

And for the whole sum, (viz. 100l) you must debit stock. See the several accompts, fol. 1, 2.

Q I see by the first page of the day book, that it contains entries of goods sold to sundry persons: How must these be posted.

A To the debit of Richard Hughs, what sold him.

To debit of Anthony Coule, the like.

To debit of John Gray and company, the like.

To debit of Richard Hunt, the like. See their accompts, Fol. 3. ledger.

And counterpart muſt be given for the whole ſum of this page (viz 16l 10s 10d) on credit of merchandize in the ſaid ledger. See accompt of merchandize, Fol. 1. ledger.

And the like muſt be done for the page 2, 3, 4, 5, and 6 of the ſaid day book.

Note, That the ready money taken for goods ſold is poſted each month to the debit of your caſh book.

Q How muſt I enter the monies I receive of debtors on my ledger.

A On your debit ſide of your caſh book. See that book.

Q How muſt I poſt theſe ſums received into my ledger.

A To the credits of the perſons, of whom received. See the accompts of

Richard Hughs ——	Fol. 3
Anthony Coule — -	Fol. 3
John Gray and company -	Fol. 3
Thomas Willon - -	Fol. 3
Henry Trap - - -	Fol. 4

Q How muſt I poſt (into my ledger) the total receipts of the month of Auguſt (viz. 57l 3s and 10)

A You muſt poſt that total to the debit of your caſh, in your ledger, writing,

To ſundries. Received per caſh book. See the account of caſh in the ledger, Fol. 1.

Do the like for September and October's receipts.

Q How muſt I enter the monies I pay to theſe I owe to, and who have credit in my ledger.

A On the credit ſide of your caſh book. See the caſh book.

Q How muſt I poſt thoſe ſums paid.

A To the debits of the perſons to whom paid. See the accompts of Thomas Richards, Fol. 2 and John Fair, Fol. 2. in your ledger.

Q How muſt I poſt (into my ledger) the total payments of the month of Auguſt (viz. 30l.)

A You muſt poſt into the credit of your caſh, in your ledger, writing,

By ſundries paid per caſh book. See the accompt of caſh in your ledger, Fol. 1.

Q I underſtand by theſe directions, how to ſtate and poſt my books, How muſt I proceed in balancing my ledger.

A Value your merchandize remaining unſold, and enter the ſum of their value on credit of the accompt of merchandize, in your legder. See the accompt of merchandize, Fol. 1.

And give the counterpart in debit of the account of balance in the ſaid ledger. See the debit of balance, Fol. 1.

Which done, ſubtract the debit ſide of the ſaid accompt of merchandize from its credit, and place the remainder (viz. 97l 10s) on the debit ſide of it. See the accompt, Fol. 1.

And give counterpart on credit of profit and loſs in the ſaid ledger. See accompt of profit and loſs, Fol. 4.

Then add up debtor and creditor to the accompt of caſh in the ſaid ledger, and ſubtract the credit from the debit, and place the caſh remaining (viz 297l 7s 1d) on credit of the ſaid accompt of caſh. See the accompt, Fol. 1. and give counterpart in debit of the accompt of balance. See ſaid accompt of balance, Fol. 4.

Q How muſt I do with the accompt of expences.

A Write on its credit ſide (the 32l.) by profit and loſs, and give counterpart in debit of the accompt of profit and loſs. See both the accompts, Fol. 2, 4.

Q How muſt I do with the accompt of George Maſon, who I find by his accompt, owes me 10l.

A You muſt write on credit of his accompt by balance now owing to me 10l.

And give counterpart, on debit of balance. See both the accompts, Fol. 2, 4.

Do in the ſame manner by the accompts of

Germain Bell - - -	Fol. 3
Richard Hughs - - -	Fol. 3
John Gray and company	Fol. 3
And Thomas Wilſon - -	Fol. 3

See their particular accompts in your ledger.

Q How muſt I do with the accompt of Thomas Richards, to whom I find I owe 20l.

A You muſt write on the debit of his accompt. To balance now due to him 20l.

And give counterpart on credit of balance. See both the accompts, Fol 2. 4.

Do the like with the accompt of John Fair. See his accompt, Fol 2.

Q How muſt I do to balance or cloſe the accompts of ſtock, profit and loſs.

A Subtract the debit, or profit and loſs form its credit, and ſet the remainder (viz. 651 10s) being your clear gains during the time of this trade, on the debit of profit and loſs. See the accompt, Fol. 4.

And give counterpart in credit of ſtock. See accompt of ſtock, Fol. 4.

Q How muſt I do to balance the accompt of ſtock.

A Subtract its debit from its credit, and ſet the remainder (viz. 6851 10s, being your preſent neat ſtock) on the debit of ſtock. See the accompt, Fol. 1.

And give counterpart in credit of balance. See accompt of balance, Fol. 4.

This done, your ledger is balanced, and the accompt of balance, Fol. 4.

This done, your ledger is balanced, and the accompt of balance (if you have proceeded right) will be equal on both ſides.

The INVENTORY.

Lond. Aug. 1. 1762

I Have merchandize of ſundry ſorts to the value of——		L. 520—00—00
In caſh or ready money —— ——		180—00—00
Owing to me, by		
Richard Maſon —— —— ——		20—00—00
Germain Bell —— —— ——		10—00—00
Owing by me, to		
Thomas Richards	L. 60—00—00	
John Fair —— —	50—00—00	
——	L. 110—00—00	
My neat ſtock	620—00—00	

Cash-Book. I.

Receipts ——— Debtor.

August, 1762.

				l.	s.	d.
	To stock by inventory		1	1800	00	00
1	Richard Hughs, of him		3	400	00	
8	Anthony Coule, ditto		3	300	06	
12	John Gray and company, ditto		3	100	06	
16	Thomas Wilson, ditto		3	400	00	
20	Henry Trap, ditto		4	150	00	
30	Merchandize since 1st of August			42	18	10
pt. 31						
	L. 57—03—10 Received			237	03	10

September, 1762.

	Last balance			20	07	10
1	Richard Hughs, of him		3	8	15	11
—	Anthony Coule, ditto		3	3	00	00
15	George Mason, ditto		2	10	00	00
20	Germain Bell, ditto		2	5	00	00
24	Henry Trap, ditto		4	2	00	00
30	John Gray and company, ditto		3	2	00	03
pt. —	Merchandize since 1st of September			38	05	06
	L 69—18—03 Received			276	12	06

I.

Payments——Creditor.

				l.	*s.*	*d.*
	August, 1762.					
28	By Thomas Richards, to him —		2	20	00	00
31	John Fair, ditto —— ——		2	10	00	00
	Paid this month			30	00	00
	Resting per balance			207	03	00
				237	03	10
	September, 1762.					
22	John Fair, to him —— ——		2	5	00	00
28	Thomas Richards, ditto —— —		2	10	00	00
	Paid this month			15	00	00
	Resting per balance			261	12	06
				276	12	06

2.

	Receipts ——— Creditor.		l.	s.	d.
	October, 1762.				
	Last balance		261	12	06
11	To Anthony Coule, of him ——	3	2	00	00
20	John Biddy, ditto —— ——	4	2	18	00
31	John Gray and company, ditto —	3	5	15	03
pt. —	Merchandize since 1st of October		86	11	04
			—	—	—
	L. 97—04—07 Received		358	17	01
	November, 1762				

2.

Payments——Creditor.

October, 1762.

		l.		d.
15	By Thomas Richards, to him ——	2	10	00
28	John Fair, ditto —— —— ——	2	20	00
31	Expences, &c. since 1st of August	1	32	00
	Paid this month——	62	00	00
	Resting per balance——	296	17	01
		358	17	01

November, 1762.

A

DAY-BOOK,

OR

JOURNAL.

Day-Book. 1.

				l.	s.	d.
	Accompts debtor to merchandize.					
	Sold. August 1. 1762.					
3	Richard Hughs,					
	29½ ells linnen at		s.	3—2	6 05	01
	——— ——— ditto ——— ——— ———					
3	Anthony Coule,					
	5 8½ ells linnen at	——— ———	s.	2—4	6 16	06
	——— ——— ditto 5 ——— ——— ———					
3	John Gray and company,					
	3 doz. ſciſſars, at	4—0 ———	l.	0—12—0		
	3 doz ditto	3—9 ———		0—11—3		
	5 doz. round points, at	3—9		1— 2—6		
	6 doz. middling	2—8		0—16—0		
				———	2 09	
	——— ——— ditto 10			——— ———		
22	Richard Hughs,					
	3 maſſes of pearl, at	———	l.	0—2—6	0 07	06
				——— ———	———	
				Merchandize ſold—	10 10	10

Day-Book. 2.

						l.	*s.*	*d.*
	Accompts debtor to merchandize.							
	Sold.							
	August 17. 1762.							
3	Thomas Wilſon,							
	12 doz. ſciſſars	4—3	*l.*	4—12—0				
	6 doz middling	1—3		1—05—0				
	9 doz. ditto	2—8		1—04—0				
	20 doz ſmall	1—6		1—10—0				
						8	12	00
3	—— ——ditto 20 —— ——							
	Anthony Coule,							
	1 looking glaſs —— ——		*l.*	0—08—6				
	1 ditto middling —— ——			0—09—6				
	3 tortoiſe ſhell combs ——			0—06—0				
						1	04	00
4	—— —— ditto 23 —— ——							
	Henry Trap,							
	1 doz. of ſciſſars with caſes		*l.*	0—09—6				
	1 doz. without caſes ——			0—05—9				
						0	15	00
	Sold.							
	August 27. 1762.							
3	Richard Hughs,							
	3 pair of ſciſſars half barb		*l.*	0—06—0				
	1 doz. ditto, ſma'l ſet ——			0—05—0				
	2 knives at 20d ——			0—03—4				
	1 doz. of comb bruſhes ——			0—03—0				
	6 pen knives at 8d ——			0—04—0				
	12 doz. claſp knives ——			1—17—0				
	14 doz. knives horn handed			3—00—0				
						5	18	04
	Merchandize ſold—					16	10	04

Day Book.

	Accompts debtor to merchandize	l.	s.	d.	
	Sold.				
	August 31. 1762.				
1	Receipts in ready money for goods since the 1st of August. —— ——	42	18	10	
	September 3. 1762				
	Henry Trap,				
4	A parcel of ſciſſars —— —— ——	0	12	00	
3	—— —— ditto 6 —— ——				
	Richard Hughs,				
	2 maſſes of pearl, at —— ——s. 2—6	0	05	00	
3	—— —— ditto 11 —— ——				
	Richard Hughs,				
	13 ells cloth, at —— —— s. 2—6	1	12	06	
3	—— —— ditto 15 —— ——				
	Anthony Coule,				
	4 maſſes pearl 2—6 l 0—10—0				
	1½ doz. pendants 4—6 0—06—6	0	16	00	
4	—— —— ditto 16 —— ——				
	Henry Trap,				
	12 doz. horn trumpets, 2 l 1—01—4				
	2 doz. comb bruſhes, 3 0—06—0				
	2 doz. ditto, 2 0—04—0				
	—— ——	1	11	00	
	Merchandize ſold—	47	18	04	

Day Book. 4.

					£.	s.	d.
	Accompts debtor to merchandize.						
	Sold.						
	September 30. 1762.						
4	John Biddy,						
	3 maſſes Ven pearl, at	l.	1	00 0			
	2 doz. ſciſſars, at		0	09 0			
	13 doz. fine combs, at		1	09 0			
					2	18	00
	ditto						
3	John Gray and company,						
	1 piece white gauſe qt. 24 ells			— —			
	1 piece ditto 22			— —			
	1 piece ditto 20			— —			
	1 piece ditto 18			— —			
	1 piece yellow ditto 20			— —			
	1 piece black ditto 19			— —			
	Ells 123 at 21 d				10	15	03
	ditto						
1	Receipts in ready money for goods ſince the 1ſt of September			— —	38	6	03
	October 2. 1762.						
3	Thomas Willon,						
	1 doz. ſciſſars with caſes, at l		0	12 0			
	4 maſſes pearl, at 2s		0	08 4			
	9 maſſes ditto at		3	17 4			
					4	17	04
	Merchandize ſold —				56	16	10

Day Book. 5.

Accompts debtor to merchandize.	l.	s.	d.
Sold.			
October 29. 1762.			
Thomas Wilson,			
2 pieces of tabby, qt. 61 ells——8s 6d	l. 25 18 6		
1 piece ditto, qt. 28 ells——8s 6d	11 17 6		
	37	16	6
ditto 31			
Receipts in ready money for goods since the 1st of October ——	86	11	04
Merchandize sold—	124	07	10

THE LEDGER.

ALPHABET.

B

Bell, Germain 2
Biddy, John 4
Balance 4

C

Coule, Anthony 3
Cash 1

E

Expen. and abatem. 1

F

Fair, John 2

G

Gray, John and com. 3

H

Hughs, Richard 3

M

Merchandize 1
Mason, George 2

P

Profit and loss 4

R

Repts. and paym. cash 1
Richards, Thomas 2

S

Stock 1

T

Trap, Henry 4

W

Wilson, Thomas 3

Ledger. 1.

				£.	s.	d.
		Stock—Debtor.				
1762		To ſundry to whom I owe ---	4	110	00	00
Aug.	2	To balance N. Stock		685	11	00
Oct.	31			—	—	—
				795	11	00
		Merchandize, Debtor.				
1762						
Aug.	1	To ſtock per inventory —	1	520	00	00
Oct.	31	To profit and loſs, carried thither — —	4	97	10	00
				—	—	—
				617	10	00
		Receipts or Caſh, Debtor.				
1762						
Aug.	1	To ſtock, money per inventory	1	180	00	00
	31	To ſundries per book, page 1		57	03	10
Sept.	30	To ſundries — — 1		69	18	08
Oct.	31	To ſundries — — 1		97	04	07
				—	—	—
				404	07	01
		Expences, &c. Debtor.				
1762						
Oct	3	To payment hereon ſince 1 Auguſt — —	1	31	19	00

Ledger. I.

				l.	s.	d.
		Stock—— Creditor.				
1762 Aug.	13	By ſundry per inventory ——	4	730	00	00
Oct.	31	By profit and loſs in 3 months		65	11	00
				795	11	00
		Merchandize, Creditor.				
1762 Aug.	10	By ſundries ſold, day book	1	16	10	0
	27	By ſundries —— ——	2	16	10	04
Sept	16	By ſundries —— ——	3	47	18	04
Oct.	20	By ſundries —— ——	4	56	17	01
	31	By ſundries —— ——	5	124	07	0
				262	14	05
		By bal. value of remains ——	4	354	15	07
				617	0	00
		Payments or Caſh, Creditor.				
1762 Aug	31	By ſundries per book ——	1	30	00	00
Sept	30	By ſundries —— ——	1	15	00	00
Oct.	31	By ſundries —— ——	1	62	00	00
				107	00	00
		By balance, reſt in caſh ——	1	297	07	01
				404	07	01
		Expences, &c. Creditor.				
1762 Oct.	31	By profit and loſs carried there	4	31	19	00

Ledger. 2.

				l.	s.	d.
1762		George Maſon, Debtor.				
Aug.	1	To ſtock, now owing me ——		1	20	00 00
1762		Germain Bell, Debtor.				
Aug.	1	To ſtock, due to me ——		1	10	00 00
1762		Thomas Richards, Debtor.				
Aug	23	To payment, to him ——		1	20	00 00
Sept.	28	To ditto —— —— ——		1	10	00 00
Oct.	25	To ditto —— ——		1	10	00 00
					—	— —
		To balance now due to him			40	00 00
					20	00 00
					—	— —
					60	00 00
1762		John Fair, debtor.				
Aug.	31	To payment, to him — ——		1	10	00 00
Sept.	23	To ditto —— —— —— —		1	5	00 00
Oct.	28	To ditto —— —— —— —		1	20	00 00
					—	— —
					35	00 00
		To balance now owing him—		4	15	00 00
					—	— —
					50	00 00

Ledger. 2.

				l.	s.	d.
		George Maſon, Creditor.				
1762 Sept.	15	By receipt of him —— —		1	10	00 00
Oct.	31	By balance now owing to me		4	10	00 00
					20	00 00
		Germain Bell, Creditor.				
1762 Sept.	20	By receipt of him —— —		1	5	00 00
Oct.	31	By balance now owing me		4	5	00 00
					10	00 00
		Thomas Richards, Creditor.				
1762 Aug.	1	By ſtock now owing him —		1	60	00 00
		John Fair, Creditor.				
1762 Aug.	1	By ſtock now due to him —		1	50	00 00

Ledger. 3.

				l.	s.	d.
1762		Richard Hughs, Debtor.				
Aug.	1	To merchandize sold ——	1	6	05	01
	10	To ditto —— ——	1	0	07	06
	27	To ditto, a parcel ——	1	5	18	04
	6	To ditto, 3 masses of pearl	1	0	5	00
Sept.	11	To ditto, 13 ells of cloth	1	1	12	06
				14	08	05
1762		Anthony Coule. Debtor.				
Aug.	5	To merchandize sold him ——	1	6	16	06
	20	To ditto, a parcel ——	1	1	04	00
Sept.	15	To ditto, a parcel —— ——	1	0	16	00
				8	16	06
1762		John Gray and comp Debtor				
Aug.	5	To mercandize, a parcel ——	1	3	01	09
Sept.	30	To ditto, a parcel —— ——	1	10	15	03
				13	17	00
1762		Thomas Wilson, Debtor.				
Aug.	17	To merchandize, a parcel ——	1	8	13	00
Oct.	2	To ditto, a parcel —— ——	1	4	17	04
	29	To ditto, a parcel —— ——	1	37	16	06
				51	06	10

Ledger. 3.

				l.	s.	d.
		Richard Hughs, Creditor				
1762						
Aug.	18	By receipt of him —— ——	1	4	00	00
Sept.	11	By ditto —— —— —— ——	1	8	15	11
				12	15	11
		By balance now owing me —	4	1	12	6
				13	8	5
		Anthony Coale, Creditor.				
1762						
Aug	12	By receipt of him —— ——	1	3	06	6
Sept.	11	By ditto —— —— —— ——	1	3	00	00
Oct.	14	By ditto —— —— —— ——	1	2	00	00
		Balance—			10	00
				8	16	6
		John Gray and comp. Creditor.				
1762						
Aug	16	By receipt of them —— ——	1	1	10	6
Sept	30	By ditto —— —— —— ——	1	2	00	3
Oct.	31	By ditto —— —— —— ——	1	5	15	3
				9	05	00
		By balance now owing me—	4	4	11	00
				13	17	00
		Thomas Wilson, Creditor.				
1762						
Aug.	20	By receipt of him —— ——	1	[illegible]	[illegible]	00
Oct.	31	By balance now owing me	4	16	[illegible]	0
				51	0	0

Ledger. 4.

				l.	s.	d.
		Henry Trap, Debtor.				
1762 Aug.	25	To merchandize, a parcel	—	1	0	15 00
Sept	3	To ditto	—	1	0	12 00
	16	To ditto	—	1	1	13 00
					3	00 00
		John Biddy, Debtor.				
1762 Sept	30	To merchandize, a parcel	—	1	2	13 00
		Profit and loss, Debtor.				
1762 Oct.	31	To expences, &c. brought here		2	31	19 00
		To stock gained since Aug. 1st		1	65	11 00
					97	10 00
		Balance, Debtor.				
1762 Oct.	31	To merchandize now remaining		1	354	16 7
		To receipts, or cash resting	—	1	297	17 1
		To George Mason, now owing		2	10	00 00
		To Germain Bell, ditto	—	2	5	10 00
		To Richard Hughs, ditto	—	3	1	12 6
		To John Gray and comp. ditto		3	5	11 00
		To Thomas Willson, ditto	—	3	46	13 00
		To Anthony Coule, ditto	—	3	00	10 10
					720	01 00

Ledger. 4.

				l.	s.	d.
		Henry Trap, Creditor.				
1762						
Aug.	30	By receipt of him —— ——	1	0	15	00
Sept.	24	By ditto in full —— —— ——	1	2	06	00
				3	01	00
		John Biddy, Creditor.				
1762						
Oct.	20	By receipt in full —— ——	1	2	18	00
		Profit and loss, Creditor.				
1762						
Oct.	31	By merch. to close that accompt	1	97	10	00
		Balance, Creditor.				
1762						
Oct.	31	By Thomas Richards, I owe him	2	20	00	00
		By John Fair, ditto —— ——	2	15	00	00
				35	00	00
		By stock, for its neat ——	1	685	11	00
				720	11	00

Directions for Book-Keeping.

Queſt. HAving taught me how to ſtate, poſt, and balance my books, what method muſt I uſe at the going out of theſe books into others?

Anſw. From the balance of theſe books (ſee ledger, fol. 4.) you muſt draw out another inventory, as follows;

The INVENTORY.

London; October 31. 1762

I Have in merchandize of ſundry ſorts, to the value of	L. 354	16	07
In caſh or ready money	297	07	01

Owing to me, by

George Maſon	10	00	00
Germain Bell	5	00	00
Richard Hughs	5	12	06
John Gray and company	4	11	00
Thomas Wilſon	46	13	00
Anthony Coule	00	10	00
	720	11	00

Owing by me, to

Thomas Richards	L. 20	00	00		
John Fair	15	00	00		
				35	00 00
	My neat ſtock			685	11 00

And poſt it into your new ledger, as by the directions given for the poſting your other inventory.

Q. In the caſh-book, on debtor ſide (for inſtance in the month of Auguſt) are figures juſt before the money lines, as 1 before 180l, and 3 before 4l, &c. I deſire to know what thoſe figures ſhew.

A The figure 1 (before 180*l.* in the firſt line) ſhews the folio of the ledger, on which the accompt of ſtock ſtands.

The figure 3 following Richard Hughs, in the next line, ſhews the folio of the ledger, whereon the accompt of Richard Hughs ſtands.

The like is to be underſtood of the figure 3 following Anthony Coule: the 3 following John Gray and company: the 3 following Thomas Wilſon, and the 4 following Henry Trap, on debtor ſide of the ſaid caſh-book for the month of Auguſt, and of thoſe on debtor ſide, of the ſaid book for the months of September and October.

Q What do the figures (on the creditor ſide of the ſaid caſh book) which come juſt before the money lines ſhew? For inſtance, in the month of Auguſt on creditor ſide, of the figure 2 following Thomas Richards, juſt before the 20*l*, and the 2 following John Fair juſt before 10*l*.

A The figure 2 following Thomas Richards, ſhews that his accompt ſtands in ledger, folio 2. And the 2 following John Fair, ſhews that his accompt ſtands alſo in the ſaid ledger, folio 2.

The like is to be underſtood of the figures 2, 2 on creditor ſide of the caſh book for September.

And of the figures 2, 2, 2 on creditor ſide of the caſh book for October.

Q What does the *L* 57 : 3 : 10, at the foot of the debtor ſide of the caſh book for the month of Auguſt, ſhew.

A It ſhews the total ſum received during the month of Auguſt, and is produced by ſubtracting the 180*l.* in the firſt line from the *L.* 237 : 3 : 10, on the debtor ſide of that accompt.

The like is to be underſtood of the *L.* 69 : 18 : 8, at the foot of September, and of the *L.* 97 : 8 : 7, at the foot of October.

And as thoſe ſums ſhew the total receipt during each month, ſo the ſum 20*l.* on credit ſide of the caſh book for Auguſt, the ſum of 15*l.* for September, and the 62*l.* for October, ſhew the total payment during each of thoſe months.

Q How is the balance (or reſt of money) in caſh found.

A You muſt ſubtract the 30*l* (on credit of Auguſt's caſh book) from the *L.* 237 : 10, on the debit ſide, and the remainder, being *L* 207 : 3 : 10, and balance, or reſt of money, in caſh, which placed under the 30*l* paid, and added to it, makes a juſt balance with the debtor ſide. See the caſh book for the month or Auguſt.

You are to do in the like manner to find the balance or reſts of caſh for the months of September and October. See the caſh book for theſe months.

Q What does figure 3 againſt Richard Hughs (in the day book) and the 3 againſt Anthony Coule, and the other figures in the margin of the day book ſhew.

A They ſhew the folios of the ledger whereon the accompt of Richard Hughs, Anthony Coule, and the other accompts ſtand.

And alſo ſhew that theſe perſons or accompts are debtors ; as the figure 1 under the ſmall line of the margin, and at the foot of each page of the day book, juſt againſt the words merchandize ſold, ſhews that the accompt of merchandize ſtands in the ledger, on folio 2, and is creditor.

Q What do the figures in the ledger coming juſt before the money lines on debtor ſide, ſhew.

A As the words of each line on the debtor ſide of ſaid ledger immediately following the word to, ſhews what accompts or perſons are to be credited, or counterparted, ſo thoſe figures ſhew on what folios in the ledger thoſe accompts or perſons are to be found.

Q What does the figures coming juſt before the money lines on the creditor ſide of the ledger ſhew.

A As the words in each line on creditor's ſide of the ſaid ledger immediately following the word by, ſhews what accompts or perſons are debited or counterparted, ſo thoſe figures ſhew on what folios in the ledger thoſe accompts or perſons are to be found.

Q How muſt I enter the goods I buy.

A You muſt enter them in a bought book: as for inſtance.

Merchandize debtor to perſons.

Bought

Of (ſuppoſe) Richard Thomas, viz.

56 ells linnen, at 3ſ per ell - - - -	L. 6—18—0	
52 ells ditto, at 4ſ per ell - - - - -	10—08—0	
		L. 17—6—0

This article (and others of the like nature) muſt be poſted in your ledger, to the credit of the accompt of the perſons of whom bought, here Richard Thomas: and in the ſaid ledger to the debit of accompt of merchandize.

Q. I have been told that a good method of book-keeping will ſhew the owner of the books, or others concerned, theſe following neceſſary (and many other) particulars, viz.

Concerning merchandize.

No 1. What goods (during the whole, or any time of the accompt) have been bought, brought into charge, when, of whom, and at what prices.

2. What goods (as above) have been ſold, iſſued out of the charge, when, to whom, and at what price.

3 The whole quantity bought and ſold, and the profit or loſs, ariſing on thoſe ſo diſpoſed of.

Concerning caſh or money.

4. What ſums of money have been received (as above) to whom, and on whoſe account. Alſo whether in part or in full.

5. What ſum total has been received and paid (during the whole) or during any time as above, and conſequently the ſum reſting in caſh.

Concerning perſons with whom I deal.

6. For what ſums they ſtand indebted, from what dates, and for what

7. For what ſums I ſtand indebted to them, from what dates, and for what.

8. Whether any balance, or remainder, be due from them to me, or from me to them, and what ſum.

Concerning my expences.

9. What expence I have been at (during the time of the accompt, or any part of it) and ſuch expence conſidered and allowed; then what neat gain or loſs has attended.

Concerning my ſtock.

10. What ſtock I began with, and what my preſent ſtock is and what particulars compoſeth each.

Now I deſire you to ſhew me how this method will anſwer all theſe particulars.

A. concerning merchandize, your bought book will ſhew you the particular demands of numb. 1.

And your day book thoſe of numb. 2.

The debtor ſide of accompt of merchandize in your ledger will ſhew the whole quantity bought, and its creditor ſide the whole quantity ſold, and the ſame accompt ſhews you alſo the profit and loſs ariſing on thoſe you have diſpoſed of. See the accompt of merchandize in ledger, folio 1. thus the demands of number 3, are ſhewn.

Concerning caſh or money, the debtor ſide of your caſh book anſwers the demands in number 4. and the creditor ſide of the ſaid book ſhews the demands in number 5, and conſequently thoſe in number 6, by comparing the debtor and creditor ſides.

The creditor ſide alſo of the ſaid book, ſhews the balance (or reſt that ſhould be found) in caſh.

Concerning perſons with whom you deal,

The debtor ſides of their accompts ſhew the demands of number 6. and creditor ſides thoſe of number 7.

And conſequently their accompts compared in debtor and creditor, ſhew the demands of number 8.

Concerning your expences.

The accompt of expences in your ledger ſhews your expences, as in number 9, and the accompt of profit and loſs, will ſhew the neat gain or loſs.

Concerning your ſtock.

The accompt of ſtock in your ledger ſhews what you began with, and the accompt of balance ſhews your preſent ſtock, and of what particulars it conſiſts, and anſwers the demands in number 10.

Accompts ready caſt up for hur

The price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

Accompts ready cast up for buying or selling any Commodity by Number, Weight, or Measure.

Numb.	1 Farthing.				2 Farthings.				3 Farthings.			
	l	s	d	q	l	s	d	q	l	s	d	q
1	0	0	0	1	0	0	0	2	0	0	0	3
2	0	0	0	2	0	0	1	0	0	0	1	2
3	0	0	0	3	0	0	1	2	0	0	2	1
4	0	0	1	0	0	0	2	0	0	0	3	0
5	0	0	1	1	0	0	2	2	0	0	3	3
6	0	0	1	2	0	0	3	0	0	0	4	2
7	0	0	1	3	0	0	3	2	0	0	5	1
8	0	0	2	0	0	0	4	0	0	0	6	0
9	0	0	2	1	0	0	4	2	0	0	6	3
10	0	0	2	2	0	0	5	0	0	0	7	2
20	0	0	5	0	0	0	10	0	0	1	3	0
30	0	0	7	2	0	1	3	0	0	1	10	2
40	0	0	10	0	0	1	8	0	0	2	6	0
50	0	1	0	2	0	2	1	0	0	3	1	2
60	0	1	3	0	0	2	6	0	0	4	9	0
70	0	1	5	2	0	2	11	0	0	4	4	2
80	0	1	8	0	0	3	4	0	0	5	0	0
90	0	1	10	2	0	3	9	0	0	5	7	2
100	0	2	1	0	0	4	2	0	0	6	3	0
200	0	4	2	0	0	8	4	0	0	12	6	0
300	0	6	3	0	0	12	6	0	0	18	9	0
400	0	8	4	0	0	16	8	0	1	5	0	0
600	0	10	5	0	1	0	10	0	1	11	3	0
600	0	12	6	0	1	5	0	0	1	17	6	0
700	0	14	7	0	1	9	2	0	2	3	9	0
800	0	16	8	0	1	13	4	0	2	10	0	0
900	0	18	9	0	1	17	6	0	2	16	3	0
1000	1	0	10	0	2	1	8	0	3	2	6	0
2000	2	1	8	0	4	3	4	0	6	5	0	0
3000	3	2	6	0	6	5	0	0	9	7	6	0
4000	4	3	4	0	8	6	8	0	12	10	0	0
5000	5	4	2	0	10	8	4	0	15	17	6	0
10000	10	8	4	0	20	16	0	0	31	4	0	0

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

The Quantity of the Commodity to be bought or ſold.

Numb.	1 Penny.			2 Pence.			3 Pence.		
	l.	s.	d	l.	s.	d.	l.	s.	d
1	0	0	1	0	0	2	0	0	3
2	0	0	2	0	0	4	0	0	6
3	0	0	3	0	0	6	0	0	9
4	0	0	4	0	0	8	0	1	0
5	0	0	5	0	0	10	0	1	3
6	0	0	6	0	1	0	0	1	6
7	0	0	7	0	1	2	0	1	9
8	0	0	8	0	1	4	0	2	
9	0	0	9	0	1	6	0	2	3
10	0	0	10	0	1	8	0	2	6
20	0	1	8	0	3	4	0	5	0
30	0	2	6	0	5	0	0	7	6
40	0	3	4	0	6	8	0	10	0
50	0	4	2	0	8	4	0	12	6
60	0	5	0	0	10	0	0	15	0
70	0	5	10	0	11	8	0	17	6
80	0	6	8	0	13	4	1	0	0
90	0	7	6	0	15	0	1	2	6
100	0	8	4	0	16	8	1	5	0
200	0	16	8	1	13	4	2	10	0
300	1	5	0	2	10	0	3	15	0
400	1	13	4	3	6	8	5	0	0
500	2	1	8	4	3	4	6	5	0
600	2	10	0	5	0	0	7	10	0
700	2	18	4	5	16	8	8	15	0
800	3	6	8	6	13	4	10	0	0
900	3	15	0	7	10	0	11	5	0
1000	4	3	4	8	6	8	12	10	0
2000	8	6	8	16	13	4	25	0	0
3000	12	10	0	25	0	0	37	10	0
4000	16	12	4	33	6	8	50	0	0
5000	20	16	8	41	13	4	62	10	0
10000	41	13	0	83	6	0	125	0	0

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

The Quantity of the Commodity to be bought or sold.

Numb.	4 Pence.			5 Pence.			6 Pence.		
	l.	s.	d	l.	s.	d.	l.	s.	d
1	0	0	4	0	0	5	0	0	6
2	0	0	8	0	0	10	0	1	0
3	0	1	0	0	1	3	0	1	6
4	0	1	4	0	1	8	0	2	0
5	0	1	8	0	2	1	0	2	6
6	0	2	0	0	2	6	0	3	0
7	0	2	4	0	2	11	0	3	6
8	0	2	8	0	3	4	0	4	0
9	0	3	0	0	3	9	0	4	6
10	0	3	4	0	4	2	0	5	0
20	0	6	8	0	8	4	0	10	0
30	0	10	0	0	12	6	0	15	0
40	0	13	4	0	16	8	1	0	0
50	0	16	8	1	0	0	1	5	0
60	1	0	0	1	5	0	1	10	0
70	1	3	4	1	9	2	1	15	0
80	1	6	8	1	13	4	2	0	0
90	1	10	0	1	17	6	2	5	0
100	1	13	4	2	1	8	2	10	0
200	3	6	8	4	3	4	5	0	0
300	5	0	0	6	5	0	7	10	0
400	6	13	4	8	6	8	10	0	0
500	8	6	8	10	8	4	12	10	0
600	10	0	0	12	10	0	15	0	0
700	11	13	4	14	11	8	17	10	0
800	13	6	8	16	13	4	20	0	0
900	15	0	0	18	15	0	22	10	0
1000	16	13	4	20	16	8	25	0	0
2000	23	6	8	41	13	4	50	0	0
3000	50	0	0	62	10	0	75	0	0
4000	66	13	4	83	6	8	100	0	0
5000	83	6	8	104	3	4	125	0	0
10000	166	33	4	208	6	8	250	0	0

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

The Quantity of the Commodity to be bought or sold.

Numb.	7 Pence.			8 Pence.			9 Pence.		
	l.	s.	d.	l.	s.	d.	l.	s.	d.
1	0	0	7	0	0	8	0	0	9
2	0	1	2	0	1	4	0	1	6
3	0	1	9	0	2	0	0	2	3
4	0	2	4	0	2	8	0	3	0
5	0	2	11	0	3	4	0	3	9
6	0	3	6	0	4	0	0	4	6
7	0	4	1	0	4	8	0	5	3
8	0	4	8	0	5	4	0	6	0
9	0	5	3	0	6	0	0	6	9
10	0	5	10	0	6	8	0	7	6
20	0	11	8	0	13	4	0	15	0
30	0	17	6	1	0	0	1	2	6
40	1	3	4	1	6	8	1	10	0
50	1	9	2	1	13	4	1	17	6
60	1	15	0	2	0	0	2	5	0
70	2	0	10	2	6	8	2	12	6
80	2	6	8	2	13	4	3	6	0
90	2	12	6	3	0	0	3	7	6
100	2	18	4	3	6	8	3	15	0
200	5	16	8	9	13	4	7	10	0
300	8	15	0	10	0	0	11	5	0
400	11	13	4	13	6	8	15	0	0
500	14	11	8	16	13	4	18	15	0
600	17	10	0	20	0	0	22	0	0
700	20	8	4	23	6	8	26	5	0
800	23	6	8	26	13	4	30	0	0
900	26	5	0	30	0	0	33	5	0
1000	29	3	4	33	6	8	37	10	0
2000	58	6	8	66	13	4	75	0	0
3000	80	10	0	100	0	0	22	10	0
4000	116	13	4	133	6	8	50	0	0
5000	145	16	8	166	13	4	87	10	0
10000	291	13	0	333	6	0	375	0	0

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell. &c.

The Quantity of the Commodity to be bought or sold

Numb	10 Pence.			11 Pence.		
	l.	s.	d.	l	s.	d.
1	0	0	10	0	0	11
2	0	1	8	0	1	10
3	0	2	6	0	2	9
4	0	3	4	0	3	8
5	0	4	2	0	4	7
6	0	5	0	0	5	6
7	0	5	10	0	6	5
8	0	6	8	0	7	4
9	0	7	6	0	8	3
10	0	8	4	0	9	2
20	0	16	8	0	18	4
30	1	5	0	1	7	6
40	1	13	4	1	16	8
50	2	1	8	2	5	10
60	2	10	0	2	15	0
70	2	18	4	3	4	2
80	3	6	8	3	13	4
90	3	15	0	4	2	6
100	4	3	4	4	11	8
200	8	6	8	9	3	4
300	12	10	0	13	15	0
400	16	13	4	18	6	8
500	20	16	8	22	18	4
600	25	0	0	27	10	0
700	29	3	4	32	1	8
800	33	6	8	36	13	4
900	37	10	0	41	5	0
1000	41	13	4	45	16	8
2000	83	6	8	91	3	4
3000	125	0	0	137	10	0
4000	166	13	4	183	6	8
5000	208	6	8	229	3	4
10000	417	13	4	458	6	8

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

The Quantity of the Commodity to be bought or sold.

Nmub.	1 Shilling.		2 Shillings.		3 Shillings.	
	l.	s.	l.	s.	l.	s.
1	0	1	0	2	0	3
2	0	2	0	4	0	6
3	0	3	0	6	0	9
4	0	4	0	8	0	12
5	0	5	0	10	0	15
6	0	6	0	12	0	18
7	0	7	0	14	1	1
8	0	8	0	16	1	4
9	0	9	0	38	1	7
10	0	10	1	0	1	10
20	1	0	2	0	3	0
30	1	10	3	0	4	10
40	2	0	4	0	6	0
50	2	10	5	0	7	10
60	3	0	6	0	8	0
70	3	10	7	0	10	10
80	4	0	8	0	12	0
90	4	10	9	0	12	10
100	5	0	10	0	15	0
200	10	0	20	0	30	0
300	15	0	30	0	45	0
400	20	0	40	0	60	0
500	25	0	50	0	75	0
600	30	0	60	0	90	0
708	35	0	70	0	105	0
800	40	0	80	0	120	0
900	45	0	90	0	135	0
1000	50	0	100	0	150	0
2000	100	0	200	0	300	0
3000	150	0	300	0	450	0
4000	200	0	400	0	600	0
5000	250	0	500	0	750	0
10000	500	0	1000	0	1500	0

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

The Quantity of the Commodity to be bought or sold.

Numb.	4 *Shillings.*		5 *Shillings.*		6 *Shillings.*	
	l.	s.	l.	s	l	s.
1	0	4	0	5	0	6
2	0	8	0	10	0	12
3	0	12	0	15	0	18
4	0	16	1	0	1	4
5	1	0	1	5	1	10
6	1	4	1	10	1	16
7	1	8	1	15	2	2
8	1	12	2	0	2	8
9	1	16	2	5	2	14
10	2	0	2	10	3	0
20	4	0	5	0	6	0
30	6	0	7	10	9	0
40	8	0	10	0	12	0
50	10	0	12	10	15	0
60	12	0	15	0	18	0
70	14	0	17	10	21	0
80	16	0	20	0	24	0
90	18	0	22	10	27	0
100	20	0	25	0	30	0
200	40		50	0	60	0
300	60	0	75	0	90	0
400	80	0	100	0	120	0
500	100	0	125	0	150	0
600	120	0	150	0	180	0
700	140	0	175	0	210	0
800	160	0	200	0	240	0
900	180	0	225	0	270	0
1000	200	0	250	0	300	0
2000	400	0	500	0	600	0
3000	600	0	750	0	900	0
4000	800	0	1000	0	1200	0
5000	1000	0	1250	0	1500	0
10000	2000	0	2500	0	3000	0

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

The Quantity of the Commodity to be bought or sold.

Numb.	7 Shilling		8 Shillings		9 Shillings		10 Shill.	
	l.	s.	l.	s.	l.	s.	l.	s.
1	0	7	0	8	0	0	0	10
2	0	14	0	16	0	18	1	0
3	1	1	1	4	1	7	1	10
4	1	8	1	12	1	16	2	0
5	1	15	2	0	2	5	2	10
6	2	2	2	8	2	14	3	0
7	2	9	2	16	3	3	3	10
8	2	16	3	4	3	11	4	0
9	3	3	3	12	4	1	4	10
10	3	10	4	0	4	10	5	0
20	7	0	8	0	9	0	10	0
30	10	10	12	0	13	10	15	0
40	14	0	16	0	18	0	20	0
50	17	10	20	0	22	10	25	0
60	21	0	24	0	27	0	30	0
70	24	10	28	0	31	10	35	0
80	28	0	32	0	36	0	40	0
90	31	10	36	0	40	10	45	0
100	35	0	40	0	45	0	50	0
200	70	0	80	0	90	0	100	0
300	105	0	120	0	135	0	150	0
400	140	0	160	0	180	0	200	0
500	175	0	200	0	225	0	250	0
600	210	0	240	0	270	0	300	0
700	245	0	280	0	315	0	350	0
800	280	0	320	0	360	0	400	0
900	315	0	360	0	405	0	450	0
1000	350	0	400	0	450	0	500	0
2000	700	0	800	0	900	0	1000	0
3000	1050	0	1200	0	1350	0	1500	0
4000	1400	0	1600	0	1800	0	2000	0
5000	1750	0	2000	0	2250	0	2500	0
10000	3500	0	4000	0	4500	0	5000	0

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

The Quantity of the Commodity to be bought or ſold.

№	1 Lib.	2 Lib.	3 Lib.	4 Lib.	5 Lib.
		l.	l.		l.
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25
6	6	12	18	24	30
7	7	14	21	28	35
8	8	16	24	32	40
9	9	18	27	36	45
10	10	20	30	40	50
20	20	40	60	80	100
30	30	60	90	120	150
40	40	80	120	160	200
50	50	100	150	200	250
60	60	120	180	240	300
70	70	140	210	280	350
80	80	160	240	320	400
90	90	180	270	360	450
100	100	200	300	400	500
200	200	400	600	800	1000
300	300	600	900	1200	1500
400	400	800	1200	1600	2000
500	500	1000	1500	2000	2500
600	600	1200	1800	2400	3000
700	700	1400	2100	2800	3500
800	800	1600	2400	3200	4000
900	900	1800	2700	3600	4500
1000	1000	2000	3000	4000	5000
2000	2000	4000	6000	8000	10000
3000	3000	6000	9000	12000	15000
4000	4000	8000	12000	16000	20000
5000	5000	10000	15000	20000	25000
10000	10000	20000	30000	40000	50000

The uſe of the foregoing Tables.

THeſe tables will ſerve for many uſes; but that which they'll be moſt uſed about, as being moſt neceſſary, is to find out the true account of any number of ells, yards, or pounds, being ſold for ſo much the ell, yard, or pound.

Example. What will 5000 ells of linnen, at 11 pence the ell come to? To find this, firſt look to the price of the ell at the head of the table, then look down the ſide of the table for the number of ells, ſo you ſhall find in the laſt column but one in the table, and in the laſt line but one thereof that 5000 of any thing at 11 pence a piece, comes to 229l. 3s. 4d.

If you cannot find your price in one column, or number of things in one line, you muſt take two or three parts thereof, and add them together.

Another Example.

What will 1500 ells, at 9d come to?
In the table of nine pences you find,

	l.	s.	d.
For 1000 nine pences	37	10	0
For 500 nine pences	18	15	0
In the table of half pence,			
For 1000 half pence	2	1	8
For 500 half pence	1	0	10
	59	7	6

A New Map of ENGLAND from the latest Observations

THE GERMAN OR NORTH SEA

IRELAND

THE IRISH SEA

ST GEORGES CHANNEL

THE CHANNEL

FRANCE

Scale of Miles

Longitude from London

A Compleat

Compendium of GEOGRAPHY,

Deſcribing all the

Empires, Kingdoms and Dominions in the whole WORLD,

Shewing their ſituation, dimenſions, religions, languages, commodities, diviſions, mountains, lakes, &c.

A method for learning geography without a maſter, for the uſe of ſuch grown perſons as have neglected this uſeful ſtudy in their youth.

A table ſhewing the parallel of latitude, the breadth, and length of the day in every climate.

In a moſt plain and eaſy method.

To learn Geography without the Directions of a Maſter.

THE perſon who deſires to learn geography muſt have a ſet of maps, and after reading over the ſituation of each empire, &c. he ſhould be very exact in finding out in the map, the ſeveral places mentioned therein; and thus by reading each article ſeveral times over, and comparing them with the maps, any grown perſon may ſoon know the moſt remarkable places in the world, their ſituation, boundaries, &c. and will inſenſibly by degrees remember the names of them.

The following maps, which may be purchaſed at a ſmall expence may be ſufficient to inſtruct any reader, and render this treatiſe, eaſy and intelligible, viz.

The World, Europe, Aſia, Africa, North America, South America, England, Scotland and Ireland.

'Tis highly neceſſary, that the different parts of each of thoſe maps ſhould be diſtinguiſhed by different colours, or at leaſt by points or lines.

A Table ſhewing the Parallel of Latitude, the Breadth, and the Length of the Day in every Climate.

Climates	Parall	Bdth	Day.	Clm	Parall	Bdth	Day.
	Climates betwixt the Equator and the Polar Circles						
	D M.	D M	H.M.		D. M.	DM	H M
1	8 34	8 34	12 30	13	59 59	1 33	18 30
2	6 43	8 09	13 00	14	62 18	1 19	19 00
3	24 11	7 28	13 30	15	62 25	1 07	19 30
4	30 47	6 36	14 00	16	63 23	1 52	20 00
5	36 30	5 41	14 30	17	64 16	0 53	20 30
6	41 22	4 52	15 00	18	64 55	0 37	21 00
7	45 29	4 07	15 30	19	65 29	0 20	21 30
8	49 01	3 32	16 00	20	65 47	0 22	22 00
9	51 58	2 57	16 30	21	66 06	0 19	22 30
10	54 29	2 31	17 00	22	66 20	0 14	23 00
11	56 37	2 12	17 30	23	66 28	0 08	23 30
12	58 26	1 49	18 00	24	66 31	0 03	24 00
	Climates between the Polar Circles and the Poles.						
1	67 31	1 00	1 Mo	4	78 20	4 00	4 Mo.
2	69 31	2 00	2 Mo.	5	84 00	5 40	5 Mo.
3	73 21	3 50	2 Mo.	6	90 80	6 00	6 Mo.

A

Deſcription of the World.

GEography is a ſcience which teacheth the deſcription of the earth. It differs from Coſmography as a part from the whole, and from Chronography and Topography as the whole from its parts.

The earth is a ſpherical body, which together with the water make up one globe of ſo perfect and exact a form, and ſo beautified and adorned by the God of nature, that from its elegancy and beauty, it was called by the Greeks Κοσμος, and by the Latins Mundus.

It is ſituate according to Ptolomy and Tycho, in the center of the univerſe, but according to Copernicus, between the orbs of Mars and Venus; its ſubſtance ſo wonderful, as may well expreſs that unlimited power that performs infinitely beyond our imaginations.

As to its magnitude, it is 21600 miles in circuit, (allowing, according to the vulgar account 60 to a degree) its diameter 6874 miles; its ſemidiameter 3436; its ſuperficies in ſquare miles 148510584, and it ſolid content 169921796242 cubical miles.

For the better underſtanding all its parts, it may be divided into four general heads, viz. 1. Its imaginary parts; 2 its real parts; 3. in reſpect to its inhabitants; and, 4. its national parts.

1. Imaginary Parts.

The imaginary parts are only ſuppoſed, for the clearer underſtanding of this ſcience; they are, 1. Poles, 2. Circles. 3. Zones, and, 4 Climates.

1. The poles are the extream points of the axis, which are ſuppoſed to paſs through the center of the earth, and on which it is ſuppoſed to move daily about. They anſwer to the poles of the heavens (as the other imaginary parts) being the fartheſt diſtant from the Equator; in number two, viz. 1. The arctick, or north pole; and, 2 The antarctick, or ſouth pole.

2 The circles are divided into the greater and leſſer: the greater divide the world into two equal parts: number four, viz. 1 The equator, compaſſing the earth equally between, and fartheſt from the poles; when the ſun is here, the days and nights are equal 2. The Zodiack (in which is the Ecliptic) cutting the Equator obliquely, through which the ſun paſſes in a year. Theſe two are immoveable. 3. The horizon, dividing the viſible parts of the heavens from the inviſible 4. The Meridian, dividing the horizon into two equal parts: when the ſun is here it is noon. Theſe two are moveable.

The leſſer circles divide the world into two unequal parts; they are, 1. The Tropics, which terminate the ſun's diſtance from the equator, being 23 degrees and a half from it: when the ſun is here it is either ſummer or winter. They are two, viz. of Cancer on the north, and of Capricorn on the ſouth ſide of the equator. 2. The polar Circles, 66 degrees and one half off the Equator, and 23 and one half off the Poles; they are called the Arctic and Antarctic circles. 3. The Parallels, which are parallel to the equator, ſet in maps to ſhew the latitude, as the meridian lines are to ſhew the longitude of places. Note, That the latitude is the diſtance from the equator, and longitude from the firſt meridian, made commonly at the Canary iſles.

3 The Zones are certain ſpaces of earth included between two leſſer circles. In number five; viz. one torrid Zone, which lies between the tropics: two temperate Zones, between the tropics and polar circles; and two frigid Zones, between the polar circles and the poles.

4. A Clime, or Climate, is a ſpace of earth, between two parallels, in which the longeſt day is increaſed half an hour; as for example, in the firſt Clime, the longeſt

day in 12 hours and a half; in the ſecond 13 hours; in the third, 13 hours and a half, &c. they are in number 24 that is from the equator to the polar circles.

2. Real Parts.

The real parts are ſuch as have a real exiſtence upon the ſuperficies of the earth, divided into, 1. Water, and, 2. Land.

1. Water is divided into, 1. Ocean, called a general collection or rendezvous of all waters, giving bounds to the regions of the earth. 2. Sea, a part of the Ocean incompaſſed with land, except one ſtreight, ſuch as the Mediterranean and Baltic. 3. Streight, a part of the ocean, reſtrained into narrow bounds opening the way to a ſea, as thoſe of Magalonica and Gibraltar. 4. Lake, a large ſpace of water, wholly encompaſſed with land, as Parima and Zair. 5. Creek or Gulf, a crooked ſhore, thruſting forth as it were two arms to hold the ſea, as thoſe of Venice and Lepanto; as for Rivers, Ditches, Brooks, Fountains, &c. they need no diſcription.

2. Land, divided into 1. Continent, a vaſt track of land where many nations are joined together, as Europe, Aſia, &c. 2. Iſland, a ſpace of land wholly incompaſſed with ſea, as Britain, Japan, &c. 3. Peninſula, a ſpace of land incompaſſed with ſea except one ſmall part, as Morea, Malacca, &c. 4. Iſthums is that ſpace of land that joins a peninſula to a continent. 5. Promontory, a mountain ſhooting itſelf into the ſea, the end of which is called a Cape, as the Cape of Good Hope, Cape Verd, &c. As for Mountains. Rocks, Valleys Fields, Foreſts, Woods, Plains, &c. they are all well known.

3. Inhabitants.

The earth is divided in reſpect of its inhabitants into the right hand and left. 1. To poets the north was counted the right hand, and the ſouth the left. 2. To Prieſts, the ſouth is the right hand, and the north the left. 3. To Aſtronomers, the weſt is the right hand, and the eaſt the left. And, 4 to Geographers, the eaſt.

is the right, and the weſt the left. The inhabitants themſelves are diſtinguiſhed ; 1. In reſpect of their Situation. 2. According to their ſhadows. 3. In reſpect to the poſition of the globe. And, 4. according to the countries.

1. Thoſe according to their ſituations are divided into, 1. Antæci, which lie under the ſame meridian, and ſame longitude but on different ſide of the equator, 2. Periæci, which live on the ſame ſide of the equator, and the ſame latitude, but on oppoſite ſides of the globe. 3. Antipodes, that live diametrically oppoſite to each other.

2. Thoſe according to their ſhadows, are divided into, 1. Amphiſcii, (called alſo Aſcii) who live in the Torrid Zone, whoſe ſhadows tend both ways, 2. Periſcii, which live in the Frigid Zones, whoſe ſhadows, tend all ways. 3. Heteroſcii, in the Temperate Zones, whoſe ſhadows tend one way.

3 Theſe according to the poſition of the Globe, are diſtinguiſhed into, 1. Such as live in a Right Sphere, (under the Equator) where the ſtars riſe and ſet at right angles. 2. Such as live in an oblique ſphere; (between the Equator and Poles) where the ſtars riſe and ſet obliquely. 4 Such as live in a Parallel Sphere,) under the Poles) where the ſtars are always parallel to the Horizon.

4. Thoſe according to the countries, are diſtinguiſhed into a great many nations and people, as French, Spaniards, Italians, Germans, &c. all which ſhall be more particularly treated of hereafter.

4. National Parts.

The earth in reſpect to its countries is divided into four parts, viz. 1. Europe. 2. Aſia. 3. Africa, and 4. America ; to which may be added, 5. Terra borialis incognita, and 6 Terra auſtralis incognita. Thoſe are divided into Empires, Kingdoms, Regions Countries, Nations, &c ſubdivided into Provinces, Governments, Profectures, Circles, Territories, Diſtricts, Countries, &c.

As for the Empires, there are ſix of ſpecial note at pre'ent, viz. Turkey, Ruſſia. Perſia, Tartary, India, and Abiſſinia; to theſe we may add three others that go by the name, viz. Germany, Morocco, Monomotopa. The deſcription of theſe, with the kingdoms, inferior provinces, and ſovereignties, is the main deſign of this compendium.

Countries are for the moſt part divided according to princes dominions (but not always ſo;) they are ſeparted from each other, 1. Sometimes by ſea, as Germany and Denmark from Swedeland, 2. Sometimes by rivers, as Natolia from Turcumania, 3 Sometimes by mountains, as France frome Spain. 4. Sometimes by walls, as China from Tartary, and 5. Sometimes divided only according to the towns and forts of the princes, as France from the Low Countries. Thus much for the world in general.

A Deſcription of EUROPE.

THE continent of Europe is ſituated between 36 and 72 degrees of north latitude, and between 10 degrees weſt, and 65 degrees of eaſtern longitude, being bounded by the frozen ocean on the north; by Aſia on the eaſt; by the Mediterranean ſea, which ſeparates is form Africa on the ſouth; and by the Atlantic ocean on the weſt.

This continent with its iſlands, is divided into three grand diviſions, viz. the northern, containing Ruſſia, or Muſcovy, Sweden, Denmark and Norway, Great Britain and its iſlands, Iceland, Greenland and the iſlands of the Baltic

The middle diviſion conſiſts of Poland, Germany, and the adjoining hereditary, dominions of the houſe of Auſtria, the Low Countries, or Netherlands, France, and its conqueſts on the Rhine.

The ſouthern diviſion contains Turkey in Europe, the tributary provinces of Moldavia, Wallachia, the Crim and leſſer Tartary, Switzerland and their allies,

Italy, Spain, Portugal, and the iſlands in the Mediterranean.

Ruſſia, or Moſcovy, contains a very large part of Europe, but though the north is but little inhabited, as producing few of the neceſſaries of life, yet many of the middle and ſouthern provinces are as fruitful as any in Europe, producing every ſpecies of corn and fruits which do not require a very warm climate. The inhabitaints were civilized, and from Barbarians, were, in ſome meaſure, made a warlike and induſtrious people, by the conduct and example of Peter the Great. But they have not yet learned to trade much in their own bottoms, their goods being exported in foreign ſhipping; from which alſo they receive the produce of the ſouthern countries of Europe. Our Ruſſia merchants export thither coarſe woollen cloths, long ells, worſted, ſtuffs, tin, and tobacco: and from thence import hemp, flax, coarſe linnen, linnen yarn, Ruſſia leather, furs, tallow, iron, and pot aſhes. The dominions of the Ruſſian Empire extend far into Aſia, and even reach to the pacific ocean, being in length from eaſt to weſt upwards of 3000 miles, and 2500 in breadth from north to ſouth. The government is arbitrary and deſpotic, and their religion, that of the Greek Church.

Sweden is a cold country, encumbered with barren rocks and mountains, and a great part of the year covered with ſnow; it has few navigable rivers, but abundance of torrents which running precipitately from their rocks and mountains, after a ſhort courſe, run into the Baltic ſea, which is frozen up four or five months in the year. The country is filled with great lakes and marſhes; Lapland and the northern part produce ſcarce any vegetables, but between the mountains there are fruitful valleys. The riches of this country chiefly conſiſts in their mines of ſilver, copper and iron. They export from Sweden hard-ware, pitch, tar roſin, maſts, deals, and wooden ware, and import thither ſilks, ſtuffs, wine, brandy, ſugar, ſpices, tobacco, linnen, paper, and haberdaſhery wares. Their trade to England has been hitherto moſt advantageous, the Engliſh taking the produce and manufactures of the coun-

try, and giving them near two thirds of ſilver in return: but the encouragement now given for importing iron from New England, muſt put a ſtop to a commerce ſo diſadvantageous to us. The inhabitants are proteſtants of the Lutheran perſuaſion.

Denmark conſiſts of Jutland, the iſlands of Zealand and Funen, and the little iſlands about them. The peninſula of Jutland was antiently called the Cimbrian Cherſoneſe, or the peninſula of the Cimbri. The country is generally flat, barren, and ſandy; and the air is commonly thick and foggy, occaſioned by the ſeas which almoſt ſurround it, and by the numerous lakes in the heart of the country; however, in ſome parts there is plenty of corn and paſturage. Its chief commodities are fiſh, furniture for ſhips, ox hides, tallow, fir, wainſcot, &c. The longeſt day is ſeventeen hours and an half, and the ſhorteſt eight and an half. Their kings have been ſometimes hereditary, and at others elective; and ſometimes limitated, and at others abſolute, as they have been ever ſince the year 1660, when the peaſants, groaning under the oppreſſions of the nobility and gentry, agreed to make the crown abſolute and hereditary; they were joined by the clergy, and the king having aſſembled the nobility and gentry in a garriſoned town, in a manner compelled them to reſign their liberties. Their religion is Lutheran, as is that of Norway, which is ſubject to Denmark, and the church lands being ſeized by the government at the reformation, the clergy depend on the ſtate for their ſubſiſtence.

Norway is extremely cold and barren, and on that account is but thinly inhabited. The poor people dry their ſtock fiſh, and uſe it inſtead of bread. Their chief commodities are ſtock fiſh, furs, train oil, pitch, maſts, cables, and deal boards, which they exchange for corn, wine, fruits, and the other neceſſaries, and conveniencies of life.

As to the iſlands of Greenland and Iceland, they are cold miſerable countries, and but thinly inhabited.

As we are moſt concerned in the hiſtory of Great Britain and Ireland, we ſhall give a more particular deſcription of them, and place it in an article by itſelf.

We ſhall now treat of the middle diviſion of Europe.

Poland is a large and level country, being 660 miles in length from north to ſouth, and 560 from eaſt to weſt. It is a flat level country, well watered by lakes and rivers, the land fruitful, and producing great quantities of wheat and rye; with rich meadows and paſtures, which feed vaſt flocks and herds of cattle; it abounds with wax, pitch, ſalt, ſoap, roſin, flax, butter, cheeſe, corn, and rich furs. The government is an elective monarchy, but the king is ſo reſtrained by laws, that he has little elſe beſides the ſhadow of royalty; and while the nobility and gentry are abſolutely free, the people are in the moſt abject ſlavery, without property, or any thing they can call their own. The nobility and gentry, who are their landlords, or rather maſters, are all as deſpotic as kings, and have the liberty of doing what miſchief they pleaſe; they pay only an inconſiderable fine for taking away the life of a tenant; they ſeize and deſtroy at pleaſure, ſo that, under the appearance of freedom, this ſeems to be the worſt conſtitution on earth. As the whole nation is compoſed of abſolute maſters and abject ſlaves, the latter are only employed in cultivating the earth; all the manufactures neceſſary for the country are carried on by foreigners, and in general by the Jews, who are almoſt the only people who keep ſhops, and work at trades. The religion of the country is that of the Romiſh profeſſion, but Jews and proteſtants are tolerated. The metropolis of Poland is Warſaw, a large and populous city.

Germany is generally, on the north and eaſt, a level country, conſiſting of barren ſands, or marſhy grounds; on the ſouth it is encumbered with the mountains of the Alps, but in the middle there is a variety of hills, valleys, fruitful fields and meadows, more particularly along the banks of the Rhine, the Danube, &c. and is adorned with abundance of fine cities, caſtles, and palaces. This vaſt country is divided into ten circles, viz. three on the north, the circles of Upper and Lower Saxony, and that of Weſtphalia. Three on the ſouth, the circles of Auſtria, Bavaria, and Swabia. Three about the middle, the circles of Franconia, of the Upper and Lower Rhine. And laſtly the circle of Burgundy,

which formerly conſiſted of the dutchy of Burgundy, and the 17 provinces of the Netherlands; but theſe laſt have been long ſevered from the empire. There are in Germany upwards of three hundred ſovereign princes and ſtates, moſt of them arbitrary within their own territories. The emperor is the fountain of honour, and diſpoſes of almoſt all theſe places that are not hereditary, and which have a relation to the government of the whole empire When an emperor dies, his ſucceſſor is choſen by the nine electors; but if a king of the Romans has been choſen in the preceeding reign, he ſucceeds of courſe. By the golden bull, the perſon elected ought to be a Chriſtian prince, of German extraction, and 28 years of age. Before he is inſtalled, he ſigns a capitulation preſented him by the electors, princes, and ſtates of the empire; that he well not alienate the lands or revenues of the crown, introduce foreign forces, or employ foreigners in his ſervice. In return, they are all obliged to aſſiſt him, and to join their forces in a time of common danger, and to maintain them at their own expences; and, ſuppoſing them unanimous, they are able to raiſe and pay 500,000 men The people are of various opinions in religion; the principal ſects are thoſe of the Papiſts, Lutherans, and Calviniſts; and there are alſo Independents, Baptiſts, Quakers, the Moravian brethren, &c. but the emperor is always a Papiſt. Germany produces corn, wine, oil, bacon, beer, mum, flax, hemp and fine timber; alſo black cattle, ſheep, and excellent horſes. They have mines of iron, copper and ſilver, of which the ſilver mines of Hanover are of more value then all the other ſilver mines in Europe put together. They have alſo lead, ſalt, coal, vitriol, quickſilver, nitre, oker, and ſulphur. The people are excellent artiſts, and are remarkable for their honeſty, and ſincerity in their dealings. Vienna is the metropolis of the German empire, and the ſeat of the emperor.

The hereditary dominions of the houſe of Auſtria, are Bohemia, Hungary, Tranſilvania, Sclavonia, and Croatia.

The Netherlands are only about 300 miles long, and 200 broad; theſe contain ſeventeen provinces of which ſeven are poſſeſſed by the Dutch, and are called the U-

nited provinces, and the others are called the Auſtrian and French Netherlands. The names of the united provinces are Holland, Zealand, Friezland, Groningen, Overiſſel, Gelderland, Zutphen and Utrecht. The other ten provinces are Barbant, Flanders, Hainalt, Limburg, Luxemburg, Namur; Artois, the Cambreſis, the Marquiſate of Antwerp, the Lordſhip of Maliens, or Mechlin. Of theſe the French poſſeſs the entire provinces of Artois and Cambray, part of Flanders, Hainalt, and Luxemburg; the Dutch the north of Brabant and Flanders, and all the reſt are ſubject to the houſe of Auſtria.

France is one of the moſt flouriſhing kingdoms in Europe, but it is not ſo populous as Germany. The ſoil is exceeding fertile, producing corn, wine, oil, ſilk, and flax in great abundance. and is extremely well ſituated for a foreign trade, as it lies on the Atlantic ocean, the Engliſh channel, and the Mediterranean ſea, and is watered by many large and navigable, rivers. Their manufactures are of linnen, woollen, ſilk and lace, with which they trade to Spain, Italy, Turkey, and to the eaſt and weſt Indies. The air is temperate, agreeable and healthful; the manners of the people are polite, and they are the moſt active and enterprizing of any nation in Europe. They are under an abſolute government, and profeſs the Romiſh religion, though they pay leſs regard to the pope than any other of his children: but. nevertheleſs, the proteſtants, which are here very numerous, are ſeldom free from perſecution.

Of the ſouthern diviſion of Europe, Turkey is the moſt eaſterly, and therefore to preſerve the order in which we proceeded with the others we ſhall begin with that firſt:

Turkey in Europe is a very extenſive empire, comprehending ſome of the richeſt countries in this part of the world, extending upwards of 1000 miles from eaſt to weſt, and 500 in breadth from north to ſouth, with the numerous iſlands in the Archepelago, or Egean ſea; but part of them are in Aſia, where, as well as in Africa, their dominions are very conſiderable. In Europe the Truks are poſſeſſed of Romania, Bulgaria, Servia Boſnia, Raguſa, Wallachia, Moldavia, Beſſarabia, Budziac, and Oçzakow, Tartary, Crim, and Little Tartary,

with Albania, Epirus, Mecedonia, Theſſaly, and all the antient Greece. Situated as they are, in the centre of the continent, they might command the trade of the whole world: but this advantage they have loſt by their indolence and inactivity and the deſtructive maxims of their government. The goods imported from Turkey are raw ſilk, carpets, goats hair, mohair, yarn, goats wool, cotton wool, and yarn, dimities, burdets, ſkins, cordovants, blue, red, and yellow; coffee, rhubarb, turpentine, opium, gum ſenega, terralemnia, cluna root, and abundance of other drugs; wine, oil, figs, raiſins, dates, almonds piſtachio nuts, aliom, vitriol, boxwood, bees wax, ſaffron, &c. Conſtantinople is the ſeat of the grand ſeignior, who is an abſolute prince.

Italy, has a pure, temperate and healthful air, and the ſoil is in general exceeding rich, but the people are ſo broke with ſlavery, and harraſſed with the tyrannies, oppreſſions, and impoſitions of their prieſts, that it is far from being ſufficiently cultivated. It is in length from north weſt to ſouth eaſt, 600 miles, and upwards, but the breadth very unequal, as it is ſaid to reſemble a boot, it is deſcribed, as having the top 400 miles broad from eaſt to weſt: in the calf of the leg or middle, it is about 120, and towards the inſtep 80 miles broad. In the north are the dutches of Savoy, Piedmont, and Montferrat, ſubject to the king of Sardinia; the territory Genoa, ſubject to the Genoeſe: the dutches of Milan, Mantua, and the reſt of Montferrat, ſubject to the houſe of Auſtria; the dukedom of Modena, ſubject to its own duke; and the large territories of Venice, ſubject to that republic. In the middle of Italy is the dukedom of Tuſcany, ſubject to the duke of Lorrain; the pope's dominions, which almoſt ſurround Tuſcany; and the ſtate of Lucca. In the ſouthern diviſion is the kingdom of Naples, ſubject to the king of the two Sicilies. The people have a taſte for the polite arts, and excel in architecture, ſtatuary, muſic and painting. Our trade to Italy is carried on by ſeparate merchants, who export broad cloths, long ells, bays, druggets, calimancoes, camblets, and other ſtuffs; leather, tin, lead, fiſh, pepper, and eaſt India goods; for which they in return im-

port raw and wrought ſilk, velvets, wine, oil, ſoap, olives, anchovies, and drugs for dying.

Switzerland is ſituated in the valleys between the Alps, the higheſt mountains in Europe, which though lying between 45 and 48 degrees of north latitude, are for a great part of the year covered with ſnow, and the air is here much ſharper than in countries that lie more to the north. From theſe mountains the largeſt rivers in Europe have their ſource, particularly the Rhine, the Rhone, the Danube, the Ruſs, and the Inn. Here are alſo extenſive lakes, thoſe of Conſtance and Geneva, are each ſixty miles long. The ſoil produces ſome corn and wine, but as the fruits of the earth are frequently deſtroyed by ſtorms, or cold rains, they, to prevent the poor from periſhing in plentiful years, lay up their corn in magazines. They breed and ſupply the neighbouring countries with abundance of cattle. They have ſome crape and linnen manufactures; but as almoſt all their cloathing is imported from abroad, they wiſely rectify this inconvenience, by retrenching all ſuperfluities. Switzerland is divided into three claſſes. Switzerland Proper, or the thirteen cantons, the ſubjects of Switzerland, or the conquered countries, and the allies of Switzerland as the Griſons, the republic of Geneva, &c. Of the thirteen cantons ſome are proteſtant, and other popiſh cantons, but they all unite againſt a common enemy.

Spain enjoys a fine air, and generally ſerene ſettled weather, except in ſpring and autumn; the winter is ſo moderate in the valleys, that for nine months in the year they have very little occaſion for fires; but in June, July and Auguſt; the heats are very troubleſome. The ſoil produces excellent wheat and barley; they have rich paſtures, and their wool is the beſt in Europe; they abound in wine, oil, and ſilk; and in oranges, lemons, raiſins, citrons, prunes figs, capers, cheſnuts, almonds, and pomegranates; they have valuable mines of copper, lead, allom, and ſulphur, and the iron and ſteel of Biſcay is reckoned the beſt in Europe. But, notwithſtanding ſo fine a country, and the vaſt treaſures they have drained from their American mines, Spain is poor, and but thinly peopled; but their poverty may

be. in a great meaſure, aſcribed to their pride and indolence. Their land is cultivated by foreigners, and they export great part of the produce of their country unwrought. Thoſe of our merchants, who trade to Spain, export broad cloths, druggets, bays, long ells, calimancoes, and other ſtuffs, tin, lead, leather, fiſh, corn, hoſe, and haberdaſhery wares, and from thence import wine, oil, ſalt, and fruit. It is computed that from this trade England receives a greater balance than from that of any one nation except the Portugueze

Portugal is the moſt weſterly kingdom in Europe being about 300 miles long, and 100 broad; it is neither ſo hot nor ſo fruitful as Spain, and is encumbered with ſome of the moſt barren and unprofitable mountains; which, however, towards the bottom, being planted with vines, produce moſt excellent wine; and though the ſoil produces plenty of olives, as well as oranges and lemons, yet they have not corn enough for their ſubſiſtence. The foreign trade of the Portugueze conſiſts either in the exportation of the produce of their own ſoil, or in the merchandize they receive from their ſettlements in Aſia, Africa, and America There is no country to which the Engliſh trade is carried on to greater advantage; for though we import the greateſt part of their wine and fruit, they take our woollen manufactures in return. The inhabitants of Spain and Portugal are the moſt bigotted Papiſts in Europe.

A Deſcription of ASIA.

ASIA is ſituated between 25 and 148 degrees of eaſtern longitude, and between the equator, and 72 degrees of north latitude, being bounded by the frozen ocean on the north, by the Archipelago, the Euxine ſea, &c. which ſeparates it from Europe on the north weſt; by the Red ſea, which ſeparates it from Africa on the ſouth weſt, by the Indian ocean on the ſouth; and by the pacific ocean on the eaſt.

This quarter of the world is thrown into three grand diviſions, the firſt containing the empire of China, Chineſian Tartary, and the oriental iſlands on the eaſt. The ſecond India, Uſbec Tartary, Calmuc Tartary, and Siberia in the middle. And the third containing Perſia, Arabia, Aſtracan, Circaſſian Tartary, and Turkey in Aſia on the weſt.

China, including Chineſian Tartary, is divided from Siberia by the river Argun, and is 2000 miles in length from north to ſouth, and 1000 in breadth from eaſt to weſt. This vaſt empire is uſually divided into 16 provinces, in which are computed 155 capital cities, 1312 of the ſecond rank, and 2357 fortified towns. On the limits of China, there is a ſtone wall 1500 miles long, built to defend them againſt the incurſions of the Tartars; but, notwithſtanding this, about an hundred years ago they made a conqueſt of China. This is thought to be the moſt populous empire in the world. In the north and very far to the ſouth, the air is very cold, occaſioned by the height of the land. The chief produce of the country is ſilk, tea, china ware, gold duſt, and japan work, of which England, Holland, Portugal, and France, import a great deal, ſending them ſilver in return. Their religion is pagan, of which ſeveral ſects are tolerated. Europeans complain of them as a very deceitful people.

Of all the eaſtern iſlands, thoſe of Japan are the moſt famous; that called Japan, and which gives name to all the reſt, is about 600 miles long, and from 100 to 150 broad, beſides which, there are ſeveral others of a conſiderable bigneſs, all ſubject to the emperor of Jacan, who has fifty or ſixty vaſſal princes under his dominions. The revenues of this emperor are ſaid to be greater than thoſe of any monarch upon earth. They trade with the Chineſe, but no European nation are allowed this priviledge except the Dutch, who carry to Japan ſpices, ſugar, ſilks, woollen and linnen cloth; elephants teeth, and haberdaſhery wares, and they receive in return gold, ſilver, fine copper, cabinets, and other Japan and lacquered wares.

The Peninſula of India, or India Proper, is the moſt ſouthern part of the ſecond diviſion of Aſia, and is about

2000 miles from ſouth to north, and in the broadeſt part 1500 from eaſt to weſt. The northern part of this vaſt country, has a temperate healthful climate, but in the ſouth it is extremely hot, eſpecially when the winds blow in April and May. They have periodical rains, which beginning in June laſt till October, which is the ſeaſon for planting and ſowing: but they have ſcarce any grain beſides rice, except in the north. The produce of the continent of India, and what the Europeans export from thence, are chintz, calicoes, muſlins, pepper, and diamonds, which moſt nations purchaſe with ſilver, but the Dutch, frequently barter ſpices for them. Their religion is paganiſm, and they all believe in the doctrine of tranſmigration. They are under the government of the great Mogul, an arbitrary and deſpotic prince, who is the ſole landlord and proprietor as well as ſovereign.

India beyond the Ganges extends near 2000 miles from north to ſouth, but is of a very unequal breadth. It comprehends the kingdoms of Aſem, Ava, Pegu, Laos, Siam, Cambodia, and Malacca, the laſt is in the poſſeſſion of the Dutch, and the reſt is governed by as many Indian princes. Great part of this country would be intolerably hot, were it not for the periodical rains, which, when the ſun is vertical, overflow the country, and the breezes which come from the ſea. The natives are of an olive colour, and their religion various ſects of paganiſm. There is no country where there are ſuch numbers of elephants. Our merchants here meet with gold and precious ſtones, canes, opium, and ſuch other articles as are uſually found between the topics, but they have no corn except rice.

Tartary, which is the ſame as the ancient Scythia, comprehended all the north of Europe and Aſia, of which the Ruſſians poſſeſs the principal part, and have given it the name of Siberia; and this part of their dominions extend even to the pacific ocean, and is 2000 miles in length, and 1300 in breadth. The Tartars of Aſtracan, and the Calmuc Tartars, are alſo ſubject to Moſcovy, thoſe of Circaſſia and Dagiſtan, ſometimes put themſelves under the protection of the Turks, and Perſians, and ſometimes of the Ruſſians. The Uſbec Tartars are tributary to the ſovereign of Perſia. Nor-

thern Tartary is a barren country, almoſt always covered with ſnow, in which are few houſes or inhabitants. But in the ſouth the Tartars enjoy a temperate climate, and a fruitful ſoil; yet they do not apply themſelves to cultivate the land, but are continually moving from place to place to find paſture for their numerous flocks and herds

Perſia is the firſt country we ſhall mention in the third diviſion of Aſia. It is 1200 miles long, and almoſt as many broad. In the South, which lies near the tropic of Cancer, the air is ſo exceſſive hot, that for two or three months in the year it is dangerous to ſtir out at noon; for at that time the winds blowing over a vaſt track of burning ſands, are heated to ſuch a degree as frequently to prove mortal. There is very little water, but what they have is managed with the greateſt care, and conveyed through innumerable aqeducts to their towns, their fields and gardens. It is a country incumbered with barren mountains, but whoſe valleys are fruitful. They have a prodigious variety of the richeſt fruits, but ſcarce any corn except rice. The ſoil alſo produces abundance of medicinal drugs; and they have a fine breed of horſes, but as the country is very ſandy and filled with large deſarts, their camels and dromedaries are their moſt uſeful animals. One of the principal manufactures of Perſia, is embroidery in gold and ſilver, on cloth, ſilk, or leather. Turkey leather is chiefly brought from thence and carried thro' Turkey; as alſo thoſe called Turkey carpets are really made here. But the principal manufacture of the country is that of ſilk, which they either work up alone or mix with cotton, camel or goats hair; their brocades, gold tiſſue, and gold velvet are admirably fine. They alſo manufacture camel hair ſtuffs, camblets, ſilk and worſted druggets. Their greateſt men are merchants, but the Armenians and Indian banyans, who reſide there, carry on the moſt diſtant foreign traffic They take broad cloth from England, in exchange for their raw ſilk, and an act has lately paſſed here for carrying on the ſame trade through Ruſſia. Our Eaſt India company have long traded thither by the way of Gombroon and the Perſian gulph. The people are civil to ſtrangers, but live in a luxurious

manner; their religion is that of the Mahometan, and the ſophy of Perſia is an abſolute prince.

Arabia joins on the eaſt to Perſia, and is a country of vaſt extent, governed by ſeveral princes, and divided into many ſtates. The people generally live in tents, and move from place to place to find paſture and water for their cattle, great part of their country being a dry and barren deſart.

Turkey in Aſia, contains Chaldea, now called Eyraca, Arabic, Meſopotamia, now Diarbec; part of Aſſyria, now called Curdiſtan, Armenia, now Turcumania, part of Georgia, Mingrelia, and Circaſſia; part of Arabia, Syria, Paleſtine, Natalia, or Aſia Minor. Some of which are as fine and fruitful countries as any in the world.

A Deſcription of AFRICA.

AFRICA is joined to Aſia by the narrow iſthmus of Suez, and ſituated between 37 degrees north and 25 degrees ſouth latitude, and between 18 weſt, and 15 degrees of eaſt longitude, bounded by the Mediterranean, which ſeparates it from Europe on the north, by the iſthmus of Suez, the Red Sea, and the eaſtern ocean, which divides it from Aſia on the eaſt; by the ſouthern ocean on the ſouth; and by the Atlantic ocean, which ſeparates it from America on the weſt.

Africa is divided into ten diviſions, Egypt, Abyſſinia, or the Upper Ethiopia; the coaſt of Anian and Zanguebar; Monoemugi, Monomotopa, and Caffraria, or the Lower Ethiopia; Congo, Angola, and Guinea; Nigritia, or Negroland; Zaara; Biledulgerid; the antient Numidia; the empire of Morocco; and the coaſt of Barbary.

Egypt is ſituated near the extremity of the Mediterranean, and is 600 miſes in length from north to ſouth, and from 100 to 200 in breadth from eaſt to weſt. The air is very hot and the ſoil extremely fertile, occaſioned by the overflowing of the Nile, without which, it

would be a barren waſte, as it very ſeldom rains in this country. The lower Egypt is a triangular iſland, made by the Levant, and the two principal branches of the Nile. No place in the world is better furniſhed with corn, fleſh, fiſh, fruits and the moſt excellent garden ſtuff but the people are very ſubject to have fore eyes. The Egyptians were the inventors of almoſt all arts, and there are ſtill to be ſeen their antient pyramids, one of which is 700 feet high. Egypt is ſubject to the grand ſeignior, but his authority is extremely limited by the Egyptian princes.

Ethiopia ſuperior, comprehending Abyſſinia, Nubia, and Abex, joins to Egypt on the ſouth. The river Nile riſes from a lake almoſt in the middle of Abyſſinia, which being ſwelled by the periodical rains, that fall annually between the tropics, overflow Egypt and all the low grounds which border on that river. The country produces plenty of corn, rice, wine, ſugar, flax, and all the fruits proper to the climate; but the Turks being in poſſeſſion of Abex, have ſhut up all the avenues to this country. Camels, horſes, oxen, ſheep and aſſes are their cattle The Abyſſines are perfectly black, but have neither flat noſes nor thick lips. It was the king of this country who was called Preſter John. They keep both the Chriſtian and Jewiſh ſabbath, and both baptize and circumciſe their children, and even their female children.

The coaſt of Anian is a barren country, on the eaſt of Abyſſinia, ſubject to ſeveral African princes.

Zanguebar, is another country on the eaſt of Aſia, lying on the ſouth of Anian, and contains the provinces of Majadoxa, Melinda, Quiloa, Mozambique and Safola. The Portugueze have here made ſeveral ſettlements, and trade with the natives for gold, ſlaves, ivory, oſtrich feathers, wax and drugs.

Caffraria, or the country of the Hottentots, lies in the ſouthermoſt part of Africa, and almoſt ſurrounds the inland country of Monomotopa, a part very little known; the Hottentots are a ſavage and naſty people. In this country the Dutch have built a town and caſtle near the moſt ſouthern promontory, called the Cape of Good-Hope.

Congo and Angola lies on the weſt of Caffraria. Thither the European merchants reſort to purchaſe ſlaves. Theſe countries are ſubject to ſeveral Negro princes; but as the Portugueze have a great many ſettlements on this coaſt, and in the inland country, they pretend to the dominion of the whole, and that theſe princes are their vaſſals; however the trade is open to all the nations that pleaſe to traffick with the natives. The chief town on this part of the continent is St. Salvador; but the capital of all the Portugueze ſettlements in this part of Africa, is the city of Loango, in a ſmall iſland near the coaſt. The ſlaves of Angola, as they are not bred to labour, are generally agreed to be the lazieſt and moſt untractable of any of the ſlaves purchaſed on the coaſt.

Guinea coaſt has the Atlantic ocean on the ſouth and weſt, and is divided into the grain coaſt, from its chiefly producing Guinea grain; the ivory coaſt, from the plenty of elephants teeth found there; the gold coaſt, from its furniſhing much gold; and the ſlave coaſt, from its furniſhing the greateſt number of ſlaves. The Engliſh, Dutch, and French, have forts and factories on this coaſt; for the Portugueze, after having poſſeſſed the whole for upwards of 100 years, were drove from hence by the Dutch. The princes of the inland country being almoſt always at war, ſell their priſoners to the Europeans for ſlaves

Negroeland is a fruitful country, producing rice, Guinea grain, and Indian corn; alſo cocoa nuts, plantains, pulſe, palm trees, and tropical fruits. The Europeans trade thither for ſlaves, gold, ivory, bees wax, gum ſenega, and other drugs.

Zaara is a barren deſart country that produces ſcarcely any thing to ſuſtain life; it has no towns, but the few inhabitants who know where to find ſprings of water, live in tents, and wander from one country to another, to find graſs and water for their cattle. Theſe people are of an olive complexion, their language is Arabic, and their religion Mahometaniſm.

Bedulgerid lies on the north of Zaara; it is partly ſubject to the Turks, and partly to the king of Morocco. The climate is very hot, but generally eſteemed wholeſome. The ſoil is but indifferent, and the

commodities are chiefly cattle, corn, dates, and indigo, The religion of the inhabitants is that of Mahometaniſm.

Morocco has the Mediterranean ſea on the north and the Atlantic ocean on the weſt, and is about 500 miles long, and 200 broad: It is a fine country, conſiſting of mountains and fruitful plains. The ſoil produces corn and the richeſt fruits. They ſend ſeveral thouſand camels, horſes, and mules, every year to Mecca and Negreoland: to Mecca they carry fine woollen goods, Morocco ſkins, indigo, cochineal, and oſtrich feathers, bringing back ſilks, muſlins, callicoes, coffee, and drugs. By the caravans to Negroeland they ſend ſalt, ſilk, and woollen goods: taking gold, ivory, and negro ſlaves in return. The emperor is an abſolute deſpotic tyrant, but he has no ſhips of war except ſmall piratical veſſels.

Barbary, comprehending Algiers, Tunis, Tripoli, and Barca, lies on the eaſt of Morocco, and extends along the ſouthern ſhore of the Mediterranean, as far as Egypt. The air of the country is temperate and healthful, the ſoil fruitful; its chief commodities are honey, wax, oil, flax, dates, almonds, hides, &c. The religion of this country, as well as Morocco, is Mahometaniſm.

A Deſcription of AMERICA.

AMerica is ſituated between 80 degrees north, and 58 degrees ſouth latitude, and between 35 and 145 degrees of weſt longitude. It is bounded on the eaſt, weſt and ſouth by the ocean: but on the north ſome have imagined it joined to the other continent: whilſt others, finding a great current flowing in Hudſon's bay from the eaſt, ſuppoſe that it is divided from the north by a large river, which has a communication with the ocean, on the other ſide of the continent. Others have imagined that the north eaſt of Siberia joins to the N. weſt of the unknown continent of America, weſt of

Hudſon's bay; and that thus inſtead of two continents, we have but one. If this ſuppoſition be true; it will account for the peopling of a country ſo far diſtant from that place of the world in which man was originally placed.

The principal part of America is at preſent under the dominion of Spain, Portugal, Great Britain, and France.

The Spaniſh dominions, which are by far the largeſt, comprehend Old and New Mexico, Florida, Terra Firma, Peru, Chili, Patagonia, Paragua; and la Plata, the country of the Amazons, and the Spaniſh iſlands, of which the moſt conſiderable are Cuba, Hiſpaniola, Porto Rica and Trinidad.

The ſecond diviſion is ſubject to Portugal, and conſiſts of the country of Brazil, extending from the river Amazon, under the equator, to the river La Plata, in 35 degrees ſouth latitude, an extent of 3000 miles, but ſcarcely 200 miles broad.

The third grand diviſion is ſubject to Great Britain, and lies along the eaſtern coaſt of North America from 31 to 51 degrees of north latitude, and lying in the following order from north to ſouth. The iſle of Newfoundland, New Britain, Nova Scotia, or New Scotland, New England, New York, the two Jerſeys, Penſilvania, Maryland, Virginia, North Carolina, South Carolina, Georgia, and the iſlands of Jamaica, St Chriſtophers, Barbadoes, &c.

The fourth diviſion is claimed by the French, which, according to their maps, extends from the gulph of Mexico to the north of Canada, that is, from 28 to 52 degrees of north latitude, being 1500 miles from north to ſouth, and very little leſs from eaſt to weſt: theſe having the Britiſh dominions on the eaſt, and New Mexico on the weſt, comprehending the greateſt part of Canada and Florida, to which countries they have given the Names of New France and Louiſiana. The iſlands ſubject to France are thoſe of Caen, and part of the iſland of Hiſpaniola, Martinico, Guadalupe, and ſeveral of the other Caribbee iſlands.

The Dutch are poſſeſſed of Surinam on the coaſt of Guiana, or Caribbiana in South America, and others on

the north coaſt of Terra Firma, of which thoſe of Curaſtow, Arabia, and Bonnaire are the chief, and from hence they carry on a clandeſtine trade with the coaſts of Spaniſh America.

Denmark is poſſeſſed of the iſland of St Thomas, one of the Caribbees.

It would take up too much room to give a particular account of all the countries of this vaſt continent. We ſhall therefore conclude our account of this part of the earth with ſome general obſervations.

America, as a continent, is divided into two parts north and ſouth, by the Iſthmus of Darien. This Iſthmus is a neck of land, of about ſixty miles broad, and 300 in length, and filled with high mountains, on which the ſnow frequently lies, though it is only between 8 and 10 degrees of north latitude; the wind, which great part of the year blows from thence into the ſouth ſea, is cool and refreſhing; while on the other ſide, the air of the Atlantic ocean is exceſſive hot. America enjoys all the advantages of the other three parts of the globe, being extreamly fruitful, and having a fine air, except towards the north, where it is much colder than any part of Europe that lies under the ſame latitude. The air is filled with an infinite number of birds, and the rivers with fiſh, and (where uncultivated) the land with trees; ſo that the principal difficulty in making a new ſettlement conſiſts in clearing the ground. The Britiſh and French ſettlements chiefly produce tobacco, ſugar, pepper, corn, rice, timber, iron; and from hence are imported ſkins, furs, fiſh, and ſome drugs. The Spaniſh ſettlements, produce cochineal, and other drugs, with great quantities of gold and ſilver; but it is ſaid that the gold mines of Mexico are almoſt exhauſted. The Portugueze ſettlements at Brazil, in South America at preſent produce vaſt quantities of gold, and diamonds. And the Dutch ſettlements at Surinam furniſhes them with tobacco and ſugar.

BRITISH ISLANDS.

THE British iſlands, or the Engliſh dominions, lie in the weſtern ocean, on the north of France and weſt of Denmark, Germany and the Low Countries. Situated between the 8th, and 20th, and 35 min. of lon. and between the 50 and 59 deg. of lat. Under this name are comprehended four diſtinct parts, beſides the leſſer iſles, viz. 1. England. 2. Wales. 3. Scotland, and, 4. Ireland.

I. ENGLAND.

The kingdom of England lies on the ſouth of Scotland, and north of France, from which it is divided by the Channel, of a triangular form, encompaſſed on three ſides with ſea. In length from north to ſouth, about 360 miles, and in breadth from eaſt to weſt about 300, containing about 27 millions of acres.

The inhabitants are moſtly of the reformed religion, taught here in its purity (the diviſions I forbear to mention) ſome few are Papiſts: their language is a branch of the Teutonick, chiefly compoſed of old Saxon, Latin and French. Their chief commodities are corn, cattle, tin, copper, lead, iron, timber, coals, abundance of wool, ſtuffs, linnen, hides, tallow, butter, cheeſe, beer, &c. It is divided into ſix circuits, viz.

1. Northern circuit, 2. Midland circuit, 3. Oxford circuit. 4. Norfolk circuit, 5. Home circuit, 6. Weſtern circuit.

Rivers of principal note are four, viz. 1. Thames, 2. Severn, 3. Trent, and, 4. Tweed.

Mountains of the greateſt account are three, viz. Inglebourgh, 2. Pendle, and 3. Pennegent.

Archbiſhopricks 2. *Biſhopricks* 20. *Univerſities* 2.

An account of the ſeveral counties of England and Wales, with their produce, market-towns, and market-days.

Note, *m* ſtands for Monday, *tu* for Tueſday, *w* for Wedneſday, *th* for Thurſday, *f* for Friday, *ſ* for Saturday.

Bedfordſhire.

AN inland county, in Lincoln dioceſe, 73 miles in circumference, is a fruitful county, well ſtored with corn and cattle, eſpecially in the northern parts. It produces barley and wheat as good, if not the beſt in England.

Market-towns.

Bedford, the ſhire town, Tueſday and Saturday.

Dunſtable w	Shefford f
Woburn f	Bigleſwade tu
Ampthill th	Potton ſ
Leighton tu	Tuddington ſ
Luton m	

Berkſhire.

An inland county in the dioceſe of Salisbury, and a pleaſant county, 120 miles round, where the air is good and the ſoil fruitful. It yields plenty of corn, cattle, wild fowl, wool, and wood, eſpecially oak.

Market-towns.

Reading, the ſhire town, Saturday.

Abingdon m and f	Newbury th
Windſor ſ	Faringdon tu
Wallingford tu and f	Wanting ſ
Maidenhead w	Eaſt Iſley w
Hungerford w	Okingham tu

Buckinghamſhire, or Bucks.

Another inland county in Lincoln dioceſe, 138 miles in circuit, is very plentiful both in corn and paſture, particularly the famous Vale of Aylesbury, which feeds an infinite number of ſheep, yielding excellent wool, The Tame, Ouſe, and Coln are its principal rivers.

Market-towns.

Buckingham the chief, Saturday.

Aylesbury f	Beaconsfield th
High Wickham f	Cheſham w
Colebrook w	Risborough f
Stoney Stratford f	Amerſham tu
Oulney m	Newport Pagnel f
Marlow f	Ivingo f
Wendover th	Winſlow th

Cambridgeſhire.

An inland county, in the dioceſe of Ely, 130 miles in circumference, abounds in corn and paſture, fiſh, wild-fowl and ſaffron. 'Tis true, the north part of it, called the Iſle of Ely, is full of marſhes, and ſubject to ſmall inundations, which makes it unhealthful, and yield but little corn: but this defect is richly ſupplied with plenty of cattle, fiſh, and wild fowl. Cambridge is remarkable for a famous univerſity, containing 12 colleges and 4 halls, and are as followeth,

Peter Houſe	Founded in	1284 by Hugh de Balſham, biſhop of Ely.
Corpus Chriſti, or Bennet col.		1346. by Henry of Monmouth, duke of Lancaſter.
Gonvile and Caius		1348. and ſo nam'd from its founders.
King's college		1441. by King Henry VI.
Queen's college		1448. by Margaret, wife to Henry VI.
Jeſus college		1497. by L. L. D. Bp. of Ely.

Chriſt's college	Founded in	1506. by Margaret counteſs of Richmond, mother of H. VII.
St John's college		1506. by the ſame.
Magdalane col.		1542. by E. Stafford, the laſt D. of Buckingham of that name.
Trinity college		1546. by King Henry VIII.
Emanuel college		1584. by Sir Walter Mildman, chancellor of the exchequer.
Sidney Suſſex col.		1598. by Frances Sidney, counteſs of Suſſex.

HALLS.

Clare hall	Founded in	1343. by Richard Badew,
Pembroke hall		1347. by Mary de St Paul, counteſs of Pembroke.
Trinity hall		1353. by William Bateman, bp. of Norwich.
Katherine hall		1459. by Robert Wood, chancellor of the univerſity.

Market-towns.

Cambridge, the chief, Saturday.

Ely ſ.	Merche ſ
Caxton tu.	Royſton w
Newmarket tu	Wisbich ſ
Linton th	Soham ſ

Cheſhire, or county of Cheſter.

A maritime county in the dioceſe of Cheſter, 112 miles round. It yields more paſture than corn, and is for the moſt part level: its greateſt hills being thoſe that part it from Stafford, and Derbyſhire. There are in it ſeveral foreſts, particularly Delamere and Macclesfield foreſts: and ſo great a number of parks, that few gentlemens country ſeats are without one.

There are alſo many heaths, in which both ſheep and horſes feed; and ſome moſſy plots, which make good turf to burn.

Its principal rivers are the Dee, which waters the S. W. parts, the Wever running through the middle, and Merſey northward.

Cheese and salt are the chief product of this county, and both in great request all over England.

Market-towns.

Chester, the capital, Wednesday and Saturday.

Namptwich f	Stockport f
Middlewich f	Sandwich th
Norwich f	Astringham tu
Macclesfield m	Malpas m
Congleton f	Knotsford f
Fordesham w	

Cornwall.

A maritime county in the diocese of Exeter, is the most western county of England, surrounded with the sea on the north, south, and west, and parted from Devonshire, eastward by the Tamer, all but a slip of land; so that 'tis a perfect peninsula, 150 miles in circumference: but is none of the most fruitful parts of England. It is true, its valleys are full of corn and pasture, and the hills famous for their tin and copper mines; and it abounds in wild fowl, and the seas thereof in fish. It yields also plenty of samphire, eringo, fine slate and marble.

Market-towns.

Launceston, the chief, Saturday.

Leskard f	Truro w and f	Helston f
Lestwithiel f	Bodmin f	Saltish tu
Catchelford f	Foway f	St Columb th
Westlow, or	Kellington w	Market-Jew th
Port Pigham f	St German f	Padstow f
Grampound f	Newport f	Penzance th
Fastlow f	Tregony f	Falmouth th
Penryn w, f and f	St Ives w and f	Stratton tu

Cumberland.

A maritime county in the north of England, and in the dioceſe of Cheſter and Carliſle, is bounded northward with Scotland, and weſtward with the Iriſh ſea, and is 168 miles round. It yields plenty of corn, paſture, wild fowl, fiſh, coal-pits, and mines of copper and lead.

Market-towns.

Carliſle, the chief, Saturday.

Cockermouth tu	Alſton-Moor ſ.
Whitehaven th	Ireby th
Reſwick ſ	Kirk Oſwald th
Penrith tu	Longtown th
Brampton tu	Ravenglaſs ſ
Holm ſ	Wigton tu
Egremont ſ	

Derbyſhire.

An inland county northward in the dioceſe of Litchfield and Coventry, 130 miles in circuit, is a plentiful county of paſture, corn and wool. Here are alſo quaries of free ſtone marble, mill, lime, whet ſtones, coal, lead and iron mines, cryſtal and alabaſter.

The river Darwent, which glides through this county from north to ſouth, and falls into the Trent, divides it into two parts eaſt, and weſt.

Market-towns.

Derby, the ſhire town, Friday.

Cheſterfield ſ	Aſhbourn ſ
Workſworth tu	Blackwell m
Bolſover ſ	Dornsfield th
Alfreton m	Tiddleſwall w

Devonſhire.

A maritime county in the dioceſe of Exeter, 200 miles in circumference. It lies in the weſt of England.

borders upon Cornwall, and is watered on two ſides with the ſea, viz. north and ſouth. The air is very good, and the ſoil for the moſt part fruitful; but there are both hills and woods. This county abounds chiefly in corn, paſture, wool, wild fowl and fiſh. There are alſo tin and lead mines. Its chief manufactures are kerſeys, ſerges and lace.

Market-towns.

Exeter, the chief, Wedneſday and Saturday.

Barnſtaple f	Topſham ſ.	Dodbrood w
Dartmouth f	Axminſter ſ	Hartland ſ
Honiton ſ	Autrey tu	Hatherly tu
Oakhampton f	Bampton ſ	Holdſworthy ſ
Plimpton f	Bow ſ	Kingsbridge ſ
Taviſtock ſ	Chimleigh th	Kirton th
Tiverton tu	Cudleigh ſ	Modbury th
Plymouth m & th	Columpton ſ	Moreton ſ
Totneſs ſ	Combmartin ſ	Newton th
Aſhburton ſ	Culliton th	
Biddeford tu	Torrington ſ	

Dorſetſhire.

A maritime county upon the Channel, lies eaſt of Devonſhire, in the dioceſe of Briſtol, 150 miles in compaſs. It is a pleaſant and fruitful county, yielding plenty of corn, cattle, paſture, wild fowl and fiſh; alſo abundance of hemp, and quarries of free ſtone and marble.

Market-towns.

Dorcheſter, the capital, Saturday.

Weymouth tu & f	Wareham ſ	Cerne w
Malcomb Regis tu & f	Corfe-Caſtle th	Frampton th
	Cranborn w	Sherborn tu and f
Bridport f	Blandford ſ	Milton m
Bere w	Sturminſter th	Winbourn ſ
Pool m and th	Abbotsbury th	Stalbridge ſ
Shaftesbury ſ		

Durham.

A maritime northern county, commonly named the Biſhoprick of Durham, 107 miles in circuit. The air is ſharp, and the ſoil not very fruitful. The eaſt ſide is the beſt, the ſouth full of marſhes, and the weſt full of rocks. The greateſt advantage of this county conſiſts in coal, iron and lead mines.

Market-towns.

Aukland th	Hartlepool m
Stockton ſ	Stainthorp tu
Sunderland f	Bernard Caſtle w
Darlington m	

Eſſex.

A maritime county in the eaſt part of England, and the dioceſe of London, called Eſſex from the Eaſt-Saxons, by whom it was inhabited. It is above 146 miles in compaſs. Here the air is temperate, but near the ſea and Thames very moiſt and agueiſh. The ſoil yields plenty of corn, cattle, and wool. Here is alſo abundance of fiſh and wild fowl. In the north parts ſaffron grows to admiration. And there are ſome parts, the ſoil of which is ſo rank, that after three crops of ſaffron, it yields good barley for near 20 years together, without compoſt.

This county is watered by a great number of rivers, beſides the Thames that parts it from Kent, the Stour from Suffolk, the Lea from Middleſex, and the little Stour from Hartfordſhire; there's the Colne, Chelmer, Crouch, Roding, and many other Rivers, all yielding plenty and variety of fiſh.

Market-towns.

Colcheſter, the county town, Saturday.

Harwich tu	Hatfield f	Rumford w
Barking ſ	Witham tu	Ingerſtone w
Maldon ſ	Chelmsford f	Walden ſ

Billericay tu
Cogeſhall f
Horndon ſ
Manningtree tu
Eipping th and f
Burntwood th
Grayes th
Raleigh f
Thaxtead f
Braintree w
Dunmore ſ
Halſtead f
Waltham Abbey tu
Sudbury f

Glouceſterſhire.

An inland county in the dioceſe of Glouceſter, 138 miles round, is a fine, fruitful and delightful county. The hills on the eaſt ſide, called Cotſwold, are covered with flocks of ſheep, whoſe wool is called the fineſt in Britain. The middle parts are level, and watered by the Severn, which contributes much to the fertility. Weſtward is the antient foreſt of Dean, formerly 20 miles long; but now much leſs; the iron mines having conſumed a great part of it.

Beſides the Severn, which croſſes this county from north to ſouth, here is the Avon that parts it from Somerſetſhire, the Wye that partly divides it from Monmouthſhire, beſides the Stroud and the Iſis, all very fiſhy rivers; the Severn yielding great plenty of ſalmon.

Formerly the vales of this county were full of vineyards, which have been ſince turned into orchards, yielding plenty of apples for cyder.

In ſhort, this county abounds in corn, wool, wood, iron, cyder and ſalmon. Among its manufactures, the woollen is moſt conſiderable. Here is alſo made great quantity of good cheeſe.

Market-towns.

Glouceſter, the ſhire town, Wedneſday, and Saturday.

Cirenceſter m and f
Durſley th
Stroud f
Newent ſ
Stow th
Thornbury f
Marſhfield tu
Fairford th
Tewksbury ſ
Camben w
Chettenham f
Sudbury th
Tedbury w
Winchcomb ſ
Morton ſ
Northleech w
Blackley w
Newnham f
Letchlace tu
Panſwick tu
Wickware m
Wotton f
Dean m

Hampſhire, Hants, or Southhampton.

This is a maritime county, on St George's Channel, between Suſſex Eaſt and Dorſet Weſt, in the dioceſe of fWincheſter, 100 miles in circuit. It is a pleaſant and ruitful county, yielding plenty of graſs, corn, wool, wood and iron; and particularly noted for the excellency of its honey and bacon.

On the weſt ſide it is watered by the Avon and Stour, which meet near the ſea; and on the eaſt by the Teſt and the Itchin, that joins near Southampton.

Market-towns.

Southampton, the ſhire-town, Tueſday and Friday.

Wincheſter w and f	Farnham th
Portſmouth th and f	Baſingſtock w
Andover f	Kingſclear tu
Limington f	Ringwood w
Petersfield f	Odiham f
Stockbridge th	Rumſey f
Whitechurch f	Waltham tu
Newport w and f	Aleſton th
Alton f	

Hartfordſhire.

An inland county, in the dioceſe of London and Lincoln, 130 miles round, is a fine delightful place; and has more gentlemens parks than any other county. Here the inhabitants breathe a wholeſome air, and the ſoil yields plenty of corn, graſs and wood. The Lea and Colo are its principal rivers; wheat, barley, and malt its chief commodities, and, with Bedfordſhire, the beſt in Great Britain. The plowmen and farmers are outdone by none.

Market-towns.

Hartford, is the county town, Saturday.

St. Albans f
Barnet m
Ware tu
Barkhamſtead m
Rickmanſworth f
Hatfield th
Buntingford m
Standon f
Baldock th
Hitchin tu
Hodſon th
Stevenage f
Thring f
Watford tu
Hempſtead th

Herefordſhire.

An inland county in Hereford dioceſe, towards Wales, in circuit 120 miles, abounds in all things neceſſary for life, particularly corn, wool, ſalmon and cyder. Its wool and cyder are counted the beſt in Great Britain; and yet their cyder is made of the red ſtreak apple, ſcarce eatable, but growing no where ſo well as in this county.

Market-towns.

Hereford is the capital, Wedneſday, Friday, Saturday.

Lempſter f
Weobly th
Kyniton w
Roſs th
Pembridge tu
Ledbury tu
Bromyard m

Huntingdonſhire.

An inland county in the dioceſe of Lincoln, by ſome nick named Willowſhire, from its plenty of willow, is 67 miles round, was formerly a very woody county, and conſequently moſt proper for hunting; whence the name of Huntingdonſhire. Now it is open and marſhy on the N. E. but plentiful of paſture. In general it is a pleaſant county, diverſified with hills, and yielding plenty of corn and cattle. Its principal river is the Ouſe; now made navigable, whoſe beautiful meadows, with ſuch multitudes of cattle upon them, are well worth ſeeing.

Market-towns.

Huntingdon, the chief, Saturday.

St. Ives m
Kimbleton f
St. Neots th
Ramsey w
Yaxley tu

Kent.

A maritime county, at the east part of the Channel, in the diocese of Canterbury and Rochester, is 160 miles in compass. According to the different parts of its soil, 'tis divided into three pats, viz. the Downs, which have health without wealth; the Marshy Parts, that have wealth without health; and the Middle that has health and wealth. One part of this county is wood, another corn, and the third pasture. Its soil yields plenty of wheat in some places, in some barley, and others excellent cherries and pippins.

Market-towns.

Canterbury (famous for its cathedral) is the capital, Wednesday and Saturday.

Rochester f
Maidstone th
Dover w and f
Sandwich w and f
Romney th
Smarden f
Hithe f
Bromly th
Wye th
Cranbrook f
Cray w
Dartford f
Eltham m
Feversham w and f
Folkstone th
Gravesend w and f
Lenham tu
Lidd th
Sevenoak f
Tenterden f
Malling f
Milton f
Tunbridge f
Westram w
Woolwich f
Wrotham tu
Ashford f.

Sussex.

A maritime county upon the Channel, with Kent on the E. and Hampshire W. in Chichester diocese, is 158 miles round. Its Downs, near the sea are charming, and its vallies (called the wild of Sussex) very plentiful, of oats especially. The forests are barren, but the E.

parts yield abundance of iron, which has occaſioned a vaſt conſumption of wood. Here the roads are ſo deep in winter, that in ſome places, coaches muſt be drawn with oxen. This county is well watered, but with rivers of no long courſe. Arun is the principal. A Suſſex carp, an Arundel mullet, an Amerly trout, and a Chicheſter lobſter are much admired. And ſo is the white ear, a bird as good as a French ortolon. Its principal manufactures are iron, guns and glaſs.

Market-towns.

Chicheſter, the chief, Wed. and Sat.

Eaſt Grinſtead th	Petworth w
Haſtings w and ſ	Steyning w
Rye w and ſ	Battle th
Arundel w and ſ	Haulſham ſ
Hortham ſ	Bright Hemſton tu
Midhurſt th	Cuckfield ſ
Lewes ſ	

Lancaſhire.

A maritime county in the dioceſe of Cheſter, bounded with the Iriſh ſea, is 170 miles in circuit; of all maritime counties the leaſt ſubject to fogs, and the inhabitants generally ſtrong bodied. The ſoil is partly upon the level, yielding good wheat and barley, and the bottom of the hills excellent oats. But the hilly parts eaſtward are generally barren.

Market-towns.

Lancaſter is the county town, Saturday.

Clithero ſ	Blackbourn m	Haſlingdon w
Liverpool ſ	Carmel m	Garſtong th
Preſton w, ſ and ſ	Coln w	Kirkham tu
Wigan m and ſ	Bury th	Hornby m
Mancheſter ſ	Charnley ſ	Howſtead m
Warrington w	Dalton ſ	Ormskirk tu
Ulverſton th	Rochdale tu	Poulton m
Bolton m	Hawkſhead m	Preſcot tu

Leiceſterſhire.

An inland county, in the dioceſe of Lincoln, is 96 miles in circuit, enjoys a good air, and abounds in corn, and paſture, and is particularly famous for peaſe and beans. Paſture land is ſo good, that there are many farms let between 500 and 2000*l.* a year. The ſheep and horſes which are ſent in ſuch numbers to London are undoubtedly the largeſt is England. It yields plenty of coal. Its principal rivers are the Stour, Reek, and Swift.

Market-towns.

Leiceſter is the county-town, Saturday.

Aſhby de la zouch ſ.
Beſworth m
Hatborough tu
Hallaton th
Hinkley m
Balſdon f
Lutterworth th
Longborough th
Milton tu
Mountſorrel m
Waltham w and th

Lincolnſhire.

A maritime county in the dioceſe of Lincoln, bounded eaſt with the German ſea, is 180 miles in circuit. The north and weſt parts are the moſt fruitful; the eaſt and ſouth marſhy, yet abound in fiſh and wild fowl.

Market-towns.

Lincoln is the chief, Saturday.

Boſton w and ſ
Grantham ſ
Stamford m and ſ
Gainsby w
Gainsborough tu
Bullingbrook tu
Spalding tu
Stanton m
Burgh th
Binbrook w
Alford tu
Burton m
Barton m
Kirton th
Bourn ſ
Tatterſhall f
Wainfleet ſ
Dunnington ſ
Falkingham th
Holbeck th
Horncaſtle ſ
Louthe w & ſ
Sleeford m
Splisby m
Salisby m

Middleſex.

An inland county, in the dioceſe of London, the metropolis of Great Britain, is 81 miles in circumference. It has a ſweet wholeſome air, and fertile ſoil, much improved by the compoſt (or dung) of London. The Thames that waters it, and ſeparates it from Surrey, is the principal river.

Market-towns.

LONDON, the metropolis, hath markets for every day in the week.

Weſtminſter m, w and ſ	Uxbridge th
Brentford th	Enfield ſ
Stains ſ	Edgworth th

Monmouthſhire.

A county in the dioceſe of Landaff, formerly Welch, but now reckoned among the counties of England. It lies weſtward on the borders of Wales, watered on the ſouth by the Severn, which falls there into the ſea. It is 80 miles in circuit; woody and hilly, but very plentiful; to which the rivers Uſk and Wye, Monnow and Rumney, contribute very much. The Usk and Wye yield plenty of ſalmon and trout.

Market-towns.

Monmouth, the principal, Saturday.

Abergavenny tu	Chepſtow ſ	Pontpool ſ
Caerleon tu	Newport ſ	Uske m and ſ

Norfolk.

A maritime county, in Norwich dioceſe, bounded on the north and eaſt with the German ſea, is 140 miles in circumference. The ſoil is in ſome places fat, in ſome ſandy and in others heavy. Towards the ſea 'tis level, and yields plenty of corn. In other parts you have woods and heaths. Thoſe feed abundance of cattle

and theſe infinite numbers of ſheep and rabbits. Its principal rivers are the Ouſe, Waveney, Yare, and Thyrn: Its commodities, corn, wool, honey, and ſaffron, the beſt growing near Walſingham: its manufactures ſtuffs and ſtockings. The neighbouring ſea ſwarms with herring. Jet and amber are ſometimes found upon the coaſt. From Norwich to Yarmouth, about 30 miles, is all rich meadow; upon which moſt of the Scots runts graze, till they are fat, and then make excellent beef.

Market-towns.

Norwich, the capital, Wed. Frid. and Sat.

Lynn tu and ſ	Downham ſ	Comer t
Yarmouth ſ	Walſham w	Diſs ſ
Thetford ſ	Windham ſ	Harleſton w
Attleborough th	Ropeham ſ	Herling tu
Aleſham ſ	Snaſham ſ	Holt ſ
Buckingham ſ	Falkenham th	Wotton w
Burnham ſ	Fulſham th	Worſted ſ
Deatham ſ	Hingham ſ	Seby every ſecond m
Walſingham ſ	Caſton tu	Swatham ſ

Northamptonſhire.

An inland county, in Peterborough diocese, 120 miles in circuit, is one of the beſt counties in England, has a healthful air, rich, fruitful ſoil, abundance of inhabitants, and claims the honour of having more noblemens ſeats than any other county. It abounds in corn and cattle, wood, and ſalt petre. Its principal rives are the Ouſe, the Welland, and the Nen, all riſing in this county.

Market-towns.

Northampton, the ſhire town, Saturday.

Peterborough ſ	Rothwell m
Brackley w	Kittering ſ
Daventry w	Wellemborough w.
Oundle ſ	Trapſtone tu.
Towceſter	Cliff. tu.

Northumberland.

A maritime county, in Durham dioceſe, and bordering upon Scotland, is 160 miles in circumference, bounded by the ſea eaſtward, and on the weſt, by the impaſſable mountains of Stainmore. It has a keen piercing air; is not the moſt fruitful, but ſome parts of it are very good, eſpecially towards the ſea. Here are ſeveral lead and coal mines; a multitude of monumental antiquities, with wild fowl and fiſh in abundance.

Market-towns.

Newcaſtle, the chief town, Saturday

Berwick ſ	Hexam tu
Alnwick ſ	Wooller th
Morpeth w.	Belford tu
Rothbury th	Warkwoth th.

Nottinghamſhire.

An inland county in the dioceſe of York, 90 miles in circuit, has a wholeſome air, and different ſort of ſoil; for the ſoutheaſt parts are fertile, the weſtern woody, and yield abundance of pit coal. Here is the famous foreſt of Sherwood. The Trent and the Iddle are its prime rivers. The firſt parts this county from Lincolnſhire.

Market-towns.

Nottingham, the county town, Wed Frid. Sat.

Newark w	Bingham th
Redford w	Worſop w
Mansfield th	Tuxford in the
Southwel ſ	Clay m

Oxfordſhire.

An inland county, in Oxford dioceſe, 130 miles round, has a ſweet healthful air, a good ſoil for corn and fruit, and rich in paſture. Beſides the Thames, compoſed of

Tame and Iſis, that water this county, here is the Cherwel, Windruſh, Evenlode, &c. Oxford is remarkable for a famous univerſity, containing 20 colleges, and 5 halls, which are as follows,

Univerſity col. Baliol	Founded in	872 by the Saxon King Alfred 1262. by John Baliol, King of Scotland.
Merton		1274, by Walter de Merton, Bp. of Rocheſter
Exeter		1316. by Walter Stapleton, Bp of Exeter.
Oriel		1325. by King Edward II.
Queen's		2340. by Robert Egleſford, B. D.
New		1375 by William of Wickham, Bp of Wincheſter.
Lincoln		1427. by Richard Fleeming, and Thomas Rotheram Bp of Lincoln.
All Souls		1437. by Henry Chichley, A. bp of Canterbury
Magdalen		1459. by William of Wainfleet, Bp of Wincheſter.
Brazen Noſe		1511. by William Smith, Bp of Lincoln, and Sir Richard Sutton, Knt.
Corpus Chriſti		1516. by Richard Fox, Bp. of Wincheſter.
Chriſt-Church		1549. by King Henry VIII.
Trinity		1555. by Sir Thomas Pope
St. John's		1557. by Sir Thomas White, Lord Mayor of London.
Jeſus		1571. by Queen Eliſabeth.
Wadham		1609. by Nicholas Wadham, Eſq;
Pembroke		1620. by Thomas Teſdale, Eſq; and Richard Whitechurch, B. D.
Worceſter		1700. by Sir Thomas Cooke.
Hartford		1740. by Dr. Newton.

Halls.
St. Edmund's, St. Alban's, St. Mary's, New Inn, Magdalen } belonging to { Queen's, Merton, Oriel, New, Magdalen } College.

Market-towns.

Oxford, the capital city, Wed. and Sat.
Woodſtock tu
Bandbury tu
Burford ſ
Henley th
Whitney th
Watlington ſ
Chipping Norton ſ
Deddington ſ
Biceſter ſ
Bampton w
Tame tu
Charlbury ſ

Rutland.

An inland county, in Peterborough dioceſe, 40 miles in circuit. It yields plenty of corn and cattle, and feeds great numbers of ſheep; the wool whereof (like the ſoil) is reddiſh, from whence this county is called Rutland; that is Red-land. Here is alſo plenty of wood, and ſeveral rivers; the principal of which are the Welland and Waſh.

Market-towns.

Oakhampton ſ
Upingham w

Shropſhire.

An inland county, in the dioceſe of Hereford and Litchfield, bordering upon Wales, is 135 miles in compaſs. Here the inhabitants breathe a good air, and have the benefit of a fruitful ſoil, though hilly on the ſouth and weſt. It yields plenty of wheat and barley, pit coal, wood, and iron. The rivers are the Roden, Tame, and Severn; which laſt runs through the county.

Market-towns.

Shrewſbury, the county town, Wed. Th. Sat.

Biſhopſcaſtle f	Eliſmere tu	Wen th
Bridgnorth f	Whitechurch f	Church ſtretton tu
Ludlow m	Newport f	Oſweſtry m
Wenlock m	Drayton w	Shipton tu

Somerſetſhire.

A maritime county in the weſt of England, and dioceſe of Bath and Wells, 240 miles round, is one of the largeſt counties, plentiful of corn and paſture, moſt pleaſant in the ſummer, tho' but indifferent for travellers in the winter. Whence the proverb, Bad for the rider, but good for the abider. Beſides the Severn, which runs into the ſea, there is the Avon, Frome, Parret, Tor, and Tone. The oxen in this county are as large as thoſe in Lincolnſhire, and the meat much preferable. This county yields alſo lead and copper, lapis calaminaris, cryſtal that comes near a diamond, and wood for dyers. Its chief manufactures are woollen cloath and ſerges. At Chedder they make the beſt and the largeſt cheeſes in England, as good as the Parmeſan. The whole milk of the pariſh goes for the making of it, by agreement among the pariſhioners.

Market-towns.

Briſtol, the capital, Wed. and Sat.

Bath w and f	Axbridge th	Ranaſham th
Wells w and f	Sheptonmallet f	Crookhorn f
Bridgwater th	Somerton m	Dulverton f
Ilcheſter w	Wellington tu	Glaſtenbury tu
Tanton w and f	Bruton f	Chard m
Wincanton w	Ilminſter f	Longport f
Watchet f	Dunſtar f	Poutford tu
Southpaterton th	Wivelſcomb tu	Writon tu

Staffordſhire.

An inland county, in the dioceſe of Litchfield and Coventry, 141 miles in circumference; the air is ſharp and

healthful, the ſoil diverſe: for northward 'tis hilly and barren, ſouthward it yields plenty of corn, and graſs, iron and pit coal. The inland parts are level, but woody. Here is alſo good ſtone, marble, and alabaſter.

Beſide the Trent that waters northward, there is the Dove, Churner, Blithe, Line, Sow, and other ſmall rivers, which make the neighbouring lands very fruitful, and the ſheep that feed upon them ſome of the beſt mutton in England. Here are alſo ſome ſalt ſprings, little inferior to thoſe in Cheſhire.

Market-towns.

Stafford, the county town, Sat.

Litchfield tu and ſ	Eccliſhall ſ	Betley tu
Newcaſtle m	Kidgley tu	Locke w
Burton th	Browly tu	Tudbury tu
Penbridge tu	Breewood tu	Stow tu
Utuxetar w	Walſhall tu	Wolverhampton w

Suffolk.

A maritime county, ſouth of Norfolk, and in Norwich dioceſe, 140 miles in compaſs. The air is wholeſome, but the ſoil diverſe: ſandy and full of heaths towards the ſea, but yielding plenty of rye, peaſe, and hemp, and feeding vaſt multitudes of ſheep. Further from the ſea are Woodland, otherwiſe called High Suffolk, which feed abundance of cattle. But the moſt fruitful parts are about Edmonſbury. There are a great many parks in this county. Its principal rivers are the Stour, Creton, Deben, Orwell, and Blith. Here is abundance of cheeſe made tolerable good, but Suffolk butter is counted excellent. Its manufactures are woollen and linnen cloth.

Market-towns.

Ipſwich, the principal, Wed. Friday and Sat.

Dunwich f	Stowmarket th	Lovenham tu
Orford m	Newmarket th	Mildenhall f
Alborough f	Beccles ſ	Biddeſtone w

Sudbury f	Bury w	Clare f
Eye f	Hadley m	Bungay th
Dedington f	Framlington f	Holeſworth tu
Ixworth f	Leſtoff w	Mendleſham tu
Needham w	Neyland f	Woodbridge w

Surrey.

An inland county, which the Thames parts from Middleſex 112 miles in circuit, in the dioceſe of Wincheſter. 'Tis obſerved that the ſkirts of this county are the moſt fruitful; however in point of health, the middle parts have the advantage; both for the pleaſure they yield by their downs in hunting, and horſe races. Beſides the Thames, here is the Wye, which runs through Guildford, the Mole through Darking, and the Wandle, all three into the Thames, the firſt two near Hampton court, and the laſt near Richmond.

Market-towns.

Guildford, the county town, Saturday

Ringate tu	Kingſton f
Southwark w and f	Croydon f
Darking th	Farnham th

Warwickſhire.

An inland county, in the dioceſe of Worceſter, Litchfield and Coventry, is 135 miles in circuit, enjoys a good air; and plentiful ſoil, eſpecially on the ſouth, northward 'tis woody. Among its rivers Avon is the chief, which runs through the midſt of it, and falls at laſt into the Severn. Its chief commodity is cheeſe.

Market-towns.

Warwick, the county town, Saturday

Coventry f	Birmingham tu	Nuneaton f
Stratford th	Coleſhill w	Rugley f
Atherſton tu	Henly m	Southam m
Alceſter tu	Kyneton tu	Suttoncoleſield m

Weſtmoreland.

Weſtmoreland, in the north weſt of England, partly in the dioceſe of Cheſter, and partly that of Carliſle, is 120 miles in compaſs. It is hilly and marſhy, but not without fruitful ſpots of ground, eſpecially ſouthward. But in general it is certainly the moſt barren and wild county in England. The Eden, Ken, Lon and Eamon are the principal rivers. Ulles water and Winandermere, are two lakes, the firſt bordering upon Cumberland, and the other upon Lancaſhire.

Market-towns.

Appleby, the county town, Saturday.

Kendal ſ	Kirkbyſteven m
Longſdale th	Orton f
Burton th	Brough w
Ambleſide w	

Wiltſhire.

An inland county in Salisbury dioceſe, 140 miles round, is a healthful county. Northward 'tis ſomewhat hilly and woody; but ſouthward 'tis pretty level. In the middle of it is Saliſbury plain, noted for its large extent, and for feeding innumerable flocks of ſheep. Its principal rivers are the Iſis, Kennet, Willy, and the Nadder. It has the chief manufacture of wool; the beſt broad cloths, both white and dyed, are made all over this county.

Market-towns.

Saliſbury, the capital, Wed. and Sat.

Chippingham ſ	Crickdale ſ	Warminſter ſ
Hindon th	Deviſes th	Bradford m
Wilton w	Dounton f	Amsbury f
Marlborough ſ	Wesbury ſ	Auburn tu

Wotton baſſet th
Malmsbury ſ
Lavington w
Highworth w
Culne tu
Swindon m
Troubridge ſ

Worceſterſhire.

An inland county in the dioceſe of Worceſter, 130 miles in compaſs, yields plenty of corn, paſture, cattle, fiſh and fruit. The vale of Eveſham is noted eſpecially for its great fertility. Here are alſo ſeveral ſalt ſprings. Its rivers, the Severn, Avon, Salwarp, &c.

Market-towns.

Worceſter, the capital, Wed. Frid. Sat.

Stowerbridge ſ
Eveſham m
Bewdly ſ
Droitwich ſ
Kidderminſter th
Bromſgrove tu
Parſhore tu
Tidbury tu
Upton th
Shipton ſ

Yorkſhire

A northern maritime county in York dioceſe, is 320 miles round. 'Tis divided into three parts, N E. and W. Ridings, which laſt is the largeſt and moſt populous. 'Tis generally a moſt fruitful county, yielding plenty of corn, cattle, fiſh and wild fowl. Here are alſo abundance of fine horſes, lime ſtone, jet, and allum, Sureby is noted for its goats, Sheffield for iron, Richmondſhire for its lead, copper, and pit coal. Its principal rivers are the Humber, Are, Chalder, Dun, Derwent, Nyd, Ouſe, Swall, Youre, Warff and Tees. This county is about the ſize of the dukedom of Wirtemburg in Germany; and bigger than all the ſeven United Provinces of Holland. The manufactures here are cloths, which of late are carried to great perfection.

Market-towns.

York, the chief town, Tueſd. and Sat.

Kingſton upon Hull tu and ſ
Knaresborough w
Ripon th
Halifax th
Leeds tu and ſ
Brauford th
Aberford w
Patrington ſ
Hornſey ſ
Burlington ſ
Scatborough th

Boroughbridge ſ
Pontefract ſ
Sheffield tu
Rotheram m
Doncaſter ſ
Tickhill ſ
Bawtry ſ
Barnefly w
Wakefield th
Huthersfield tu
Snaith ſ
Sherborn ſ
Selby m
Tadcaſter th
Wetherly th
Shipton ſ
Ripely ſ
Beverly w and ſ
Heydon ſ
Howdon ſ
Wighton w
Malton tu and ſ
Thriske m
Northallerton w
Richmond ſ
Whitby ſ
Gisborough m
Pickering m
Yarum th
Stockſley ſ
Beddal tu
Maſham tu

II. WALES.

The principality of Wales, lies on the W. of England (commonly reckoned a part thereof) bordering on the Iriſh ſea, and parted by the river Dee, and a line drawn to the river Wye; in length from N. to S. about 124 miles, in breadth from E. to W. about 100.

It was firſt conquered by the Romans (about the ſame time that England was) and afterwards had a king of its own, and ſometimes two, one of North and the other of ſouth Wales; till at laſt the kings of England ſubdued them, and brought them under their power; ſo that it is at preſent under the kings of England, whoſe eldeſt ſon has the title of prince of Wales.

The inhabitants, as in the reſt of England, are moſt Proteſtants, their language very harſh, being the ſame with the old Britiſh or Gallick, but the Engliſh is alſo much uſed among them; their chief commodities are cattle, butter, cheeſe, Welch frizes, cottons, bays, herrings, hides, calves ſkins, honey, wax, and other ſuch like. It is divided into two parts, which are;

1. North Wales, the ſeat of the old Ordovices, ſince the kingdom of Guinedth, and part of Powiſland; it contains ſix counties, which are,

1	Flintſhire	chief towns	St. Aſaph and Flint
2	Denbighſhire		Denbigh
3	Iſle of Angleſey		Beamauriſh
4	Caernarvonſhire		Caernarvon and Bangor
5	Merionethſhire		Harlech
6	Montgomeryſhire		Montgomeryand Welſhpool

St. Aſaph is the chief town of the whole.

2 South Wales, the ſeat of the old Dimetæ, and part of the Silures, ſince the kingdom of Debenbarch, and part of Powiſland; it contains ſix counties, viz.

1	Cardiganſhire	chief towns	Cardigan
2	Radnorſhire		New Radnor
3	Pembrokeſhire		Pemborke and St. Davids
4	Carmarthenſhire		Carmarthen
5	Brecknockſhire		Brecknock
6	Glamorganſhire		Cardiff and Landaff

Pembroke chief of the whole.

Rivers of principal note are Wye and Dee.

Principal mountains are thoſe called Snowdown hills, and Plinlimmon.

Archbiſhopricks 0, Biſhopricks 4, Univerſities 0.

III. SCOTLAND.

The kingdom of Scotland is the reſt of the iſland of Albion or Great Britain, and lies on the north of England, from which it is parted by the rivers Tweed and Solway, and the Cheviot hills; in length from Dungſby head to the S. of Galloway 250 miles, in breadth from Aberdeen to the iſle of Mull 150 miles.

The inhabitants are Proteſtants, and thoſe chiefly Presbyterians; their language is in the ſouth parts a corrupt Engliſh, and on the N. and W parts a dialect of the Iriſh; their chief commodities are moſt ſorts of fiſh

in great abundance, much linnen cloth and tallow, vaſt numbers of cattle and hides: as alſo excellent honey, lead oar, iron, train oil, coarſe cloths, frizes, &c.

It is divided into two claſſes, viz. { S. the Firth / N. the Firth } { Edinburgh / Aberdeen }

South comprehends

Gal'oway		Kirkcudbright	
Nithſdale		Dumfries	
Annandale		Annand	W to E
Eſdale with Euſdale		— — —	
Liddiſdale		Hermitage	
Tiviotdale		Jedburgh	
The Mers		Duns	
Lauderdale		Lauder	
Tweeddale		Peebles	E to W
Clydiſdale		Glaſgow	
Kyle		Ayr	
Carrick		Burgenny	
Lothian		Edinburgh	
Stirling		Idem	
Renfrew		Idem	
Cunningham		Irvine	E to W
Iſles of Bute		Rothſay	
Iſles of Arran		— — —	
Peninſula of Cantyr		Kilzeran	

North comprehends

Fife		St. Andrews	
Menteith		Dumblain	
Lennox		Dumbarton-	E to W
Argyle		Inverera	
Perth		Idem	
Strathern		Abernethy	
Broadalbine		— — —	E to W
Lorn		Dunſtafnage	
Merns		Bervy	
Angus		Dundee	W to E
Gaury		— — —	
Athol		Blair	
Mar		Aberdeen	W to E
Badenough		Ruthven	
Lochaber		Inverloshy	

Chief Towns

N. comprhends { Buchan, Bamfe, Murray, Roſs, Sutherland, Strathnaver, Caithneſs } Chief Towns { Peterhead — — } E. to W; Idem — — — } E. to W; Elgin — — — } E. to W; Tain — — — } S to N; Dornock — — } S to N; Strathy — — — } S to N; Wick lying N E of Strathnaver

Theſe are the various diviſions of Scotland, according to the beſt maps, and the manner how they are found. But ſince that kingdom is ordinarily divided in ſheriffdoms, ſtewardries, bailiaries, and one conſtabulary, we ſhall alſo conſider in it that reſpect; and ſeeing each of theſe ſheriffdoms and ſtewardries, &c. comprehend either a part, or one or more of the ſaid diviſions, we ſhall here ſubjoin all the ſheriffdoms and ſtewardries, &c. of the whole kingdom, and annex to each of them their whole content whether more or leſs. Therefore,

Sheriffdoms of Scotland are thoſe of { Edinburgh, Bewick, Peebles, Selkirk, Wigtoun, Renfrew, Lanerick, Dumbritton, Bute, Stirling, Linlithgow, Clackmanan, Kinroſs, Coupar, Fortar, Kincardine, Elgin, Nairn, Wick, Orkney } Containing { Middle Lothian; Mers and bailiary of Lauderdale; Tweeddale; The foreſt of Etrick; The N. and W. parts of Galloway; Barony of Renfrew; Clydiſdale; Lennox; Iſles of { Bute, Arran }; Stirling, on both ſides the river Forth; Weſt Lothian; The E. parts of Stirlingſhire; The W. parts of Fife; The reſt of Fife; Angus, with its pertinents; Merns; The E. parts of Murray; The W. parts of Murray; Caithneſs; Iſles of { Orkney, Zetland } }

Sheriffdoms of Scotland are those of

- Aberdeen cont.
  - Mar, with its pertinents
  - Buchan
  - Strathbogie
- Perth cont.
  - Perth
  - Athol
  - Gaury
  - Broadalbine
  - Menteith
  - Strathern
  - as also
    - Glenshee
    - Strathandal
    - Ramach
    - Balwidder
    - Gelnurquhy
    - Stormont
- Inverara cont.
  - Argyle
  - Lorn
  - Cantyr
  - Isles W. of
    - Lorn
    - Cantyr
- Bamfe cont.
  - Bamfe
  - Strathdovern
  - Boyn
  - Enzy
  - Strathawn
  - Balveny
- Inverness cont.
  - Badenough
  - Lochaber
  - The S. parts of Ross
  - Part of Murray beyond Nairn
- Tayne cont.
  - Sutherland
  - Strathnaver
- Roxburgh cont.
  - Tiviotdale
  - Liddisdale
  - Esdale with Eusdale
- Ayre cont.
  - Kyle
  - Carrick
  - Cunningham
- Dumfries, Cromarty cont.
  - All Nithsdale
  - A little of Ross, S. of Cromarty

Beſides thoſe ſheriffdoms, there are { Stewardries, Bailiaries, One Conſtabulary.

Stewardries are { Strathern, Menteith, Annandale, Kirkcudbright } cont. { Strathern, Menteith, Annandale, E. and S. parts of Galloway.

As alſo { St Andrews, Killimuire, Abernethy } in { Fife, Angus, Perth.

Bailiaries are { Klye, Carrick, Cunningham, Lauderdale } cont. { Kyle, Carrick, Cunningham, Lauderdale.

The one Conſtabulary is that of Haddington, containing Eaſt Lothian

Principal rivers are Tay and Spey.

Mountains of greateſt note, are the Cheviot hills, and thoſe of Albany.

Chief lakes are Lomon, Neſs, and Tay.

Archbiſhopricks 2, Biſhopricks 12, and Univerſities 4.

IV. IRELAND.

The kingdom of Ireland, an iſland lying on the W. of England and Wales; in length from the N. parts of Antrim, to the S. parts of Cork, 285 miles; in breadth from the E. parts of Down, to the W. parts of Mayo, 160 miles.

The inhabitants are both Proteſtants and Papiſts; their language, a dialect of the old Britiſh, intermixed with Norwegian, Daniſh, and Engliſh; the Engliſh is

alſo frequently uſed among them, and in ſome places a mongrel ſpeech between both; their chief commodities are cattle, tallow, butter, cheeſe, honey, wax, ſalt, hemp, lennen cloth, pipe ſtaves, wool, frizes, &c. It is divided into four provinces, which are,

1. Ulſter, 2. Connaught, 3. Leinſter, 4. Munſter, or Mounſter.

Rivers of note, are Shannon, Barrow, Shur and Blackwater.

Chief mountains are Knock Patrick, Slew Bloemy, and Curlew hills.

Lakes of greateſt note are Lough Earn, Lough Neigh, and Lough Corrib.

Archbiſhopricks 4. Biſhopricks 18. Univerſity 1.

Leſſer Britiſh iſlands are,

1. The Orcades, or Orkney iſlands, on the north of Scotland. The number of them is indeed very great, 26 of them are inhabited, and the reſt called Holms, are uſed only for paſturage. Moſt of them are bleſt with a very pure and healthful air to breathe in, but their ſoil is very different, being in ſome extreamly dry and ſandy, in others wet and marſhy; however they are indifferently fruitful in oats and barley; the chief of them are Hoy, Mainland, Sapinſha, and Weſtra; the chief town is Kirkwall in Mainland. Theſe iſlands have been viſited by the Picts, and ſubject to the Danes; but Chriſtian IV. of Denmark, having quitted all his pretenſions to them in favour of James IV. of Scotland, they have ever ſince acknowledged allegiance to the Scots crown.

2. Zetland. Under this name are comprehended 46 iſlands, with 40 Holms, beſides many rocks. Of theſe iſlands, about 26 are inhabited, the reſt being uſed for feeding cattle. The chief of them are Mainland and Yell; the chief town is Ylesburg in Mainland.

3. The Hebrides. They ſurpaſs 300 in number, the moſt remarkable of which are Jona and St. Kilda.

4. Man on the weſt of England.

5. Wight on the ſouth of England, &c.

THE

Management of HORSES.

THE neceſſity every traveller lies under of having ſome knowledge of the art of managing his horſe, and the many inconveniencies frequently attending the want of this knowledge, are ſo evident, that nothing need be ſaid to evince the uſefulneſs of this article: I ſhall therefore without any further preamble, give a few hints to aſſiſt my readers in buying ſuch horſes as are fit for the road, and then treat of their management under the accidents and diſorders to which they are liable.

As to the firſt part of this task, it is the more neceſſary, ſince whoever would buy a good horſe, muſt know how to chuſe him himſelf, and never place the leaſt confidence in the words of a jockey or dealer in horſes.

Rules for buying Horſes.

IF a horſe is young, his tuſks will be ſharp pointed and grooved, or hollowed on the ſide: but the jockies have the art of burning the corner teeth of an old horſe, after they have been cut with a graver, by which means they imitate the mark, and frequently deceive; yet the cheat is diſcoverable by others ſigns: as, when he has white eye brows, he may be ſuppoſed to be about 15 or 16 years of age: the age of a horſe may alſo be known by the length and yellowneſs of his teeth, the leanneſs of the roof of his mouth, and the narrowneſs of the under jaw.

But it is not ſufficent that you are not deceived in buying an old horſe for a young one, the eye is careſully to be examined leſt you ſhould buy a horſe that

is blind, or that has ſome defect in his ſight. The beſt eye is of a hazel colour, and it is an advantage to have it rather large than ſmall; the part commonly called the ſight of the eye, ſhould be perfectly bright and clear, without the leaſt dimneſs, ſo that you may ſee the bottom, and the image of your face reflected from thence and not from the ſurface; and you ſhould alſo obſerve if upon changing the ſituation of the horſe with reſpect to the light you can diſcern the ſight of the eye contract or dilate itſelf. This, added to the clear tranſparency already mentioned is a proof of the goodneſs of the eye.

But to proceed. Every man who buys a horſe, ſhould chuſe one whoſe ſize and ſtrength are in proportion to the weight he is to carry: but in general, a middle ſiz'd horſe is beſt for the road, and one of 14 hands and an inch is of ſufficient ſtrength to carry any man under 15 ſtone.

After the jockey has exerciſed his horſe before you, you ſhould ride him yourſelf two or three miles on a rough, uneven road, when you ſhould give him his head, without forcing him by whip or ſpur to perform with more life and ſpirit than he is otherwiſe inclinable; if he walks, trots and canters nimbly, without dwelling upon the ground, taking up his fore feet moderately high, ſtepping longer or ſhorter, according as he finds there is occaſion, and going near before and wide behind, he is likely to carry his maſter well. But it muſt be remarked, that the beſt proof of the excellency of a road horſe is his trotting down hill, where it is pretty ſteep; for if he is able to perform this well, he is able to trot on any ground whatſoever.

Captain Burdon, in his Pocket Farrier, adviſes thoſe that want to buy, to obſerve that the horſes knees are not broken. This is a very good caution, and it is what all people are, or ought to be aware of; yet as one who is no common ſtumbler may have an accidental fall, you ſhould obſerve whether the knees are covered with hard ſcars, which if they be, and the hair is curled about them, it is a certain proof of his being an old offender.

If a horſe goes clean it is a pretty ſure ſign that he

moves well upon his limbs; therefore when you ſee a perſon alight at an inn, with his boots tolerably free from dirt, you may almoſt venture to buy his horſe without ſeeing him exerciſed.

The horſe that has his breaſt full and prominent is very unfit for travelling; therefore, before you buy a horſe, ſtand in a right line with his head, and mind that his breaſt don't keep his knees too far aſunder; for the nearer he ſtands with his knees provided he does not cut, the more reaſon have you to judge that he will travel expeditiouſly, therefore take particular notice that his breaſt be narrow, thin, and lean, his ſhoulder points not projecting forwards, and his fore legs ſtreight and almoſt perpendicular.

To conclude this article, there is ſcarce a better property in a horſe than a ſound, tough hoof, that will abide hard roads without much heating. A foundered hoof is very often long and deep, and ſhaped more like that of an aſs than of a horſe; but the good hoof is ſemecircular, and rather flat than otherwiſe.

Rules for travelling, with Directions for preventing and curing the Diſorders Horſes are incident to on the road.

WHen you ſet out on a journey, obſerve whether the ſhoes be faſt, whether they ſit eaſy, or, whether they do not cut either before or behind. If a horſe cuts with bad thin ſhoes, he will probably do it when he is freſh ſhod; but this may ſometimes be helped by a good ſmith.

Moſt of the diſorders to which horſes are ſubject are produced by the negligence or ignorance of the riders: and as they may be eaſily prevented by proper care, they are cured without difficulty, if taken in time. It is true it is much more eaſy to prevent diſeaſes than to cure them; for if a horſe be well curried, bruſhed and wiped down with a cloth, morning, noon and night, and duly exerciſed and well fed, he will be ſeldom out of order.

The advantage of currying and rubbing down is inconceivable; it promotes a due circulation of the blood; opens the pores, and conſequently prevents a ſtagnation of the fluids promotes perſpiration, and is the readieſt way of preſerving health.

The moſt common cauſe of greaſe and ſcratches, are the careleneſs, the naſtineſs and indolence of the groom; for unleſs the blood is kept in a balſamic ſtate by proper exerciſe, clean, ſweet and liberal feeding, that fluid, from which all the humours in an animal body are derived, muſt conſequently become depraved. As exerciſe ventilates the blood, ſo, keeping the skin clean and ſmooth, occaſions an eaſy perſpiration through the pores: for if after hard riding we ſuffer our horſes to lie with the ſweat drying upon them, we run the riſk of a violent ſurfeit, which is in fact the cauſe of moſt of the diſtempers incident to eitheir human or brute creatures.

As we have mentioned liberal feeding, it may not be improper before we proceed farther to mention what quantity of oats, &c. a man ſhould allow his horſe on the road.

A full ſized horſe that has a good appetite, and travels hard, may be allowed every day about ſix quarts of oats, half a pint of ſplit beans, and a good handful of wheat mixed together.

What is here ſaid with reſpect to the quantity of oats neceſſary for a ſized horſe, may be a ſufficient guide as to what ſhould be allowed thoſe of fourteen hands or under; therefore I ſhall only add, that he who will not allow his horſe the quantity of oats, &c. here mentioned, ſhould ride ſlowly and make ſhort ſtages.

As we have been juſt mentioning the quantity of corn neceſſary to be given to a horſe on a journey, I ſhall give the young traveller ſome hints relating to his watering his horſe on the road, and then proceed to give directions for the cure of thoſe diſorders which are occaſioned by the want of following theſe rules.

When a horſe travels he perſpires very much, and may therefore be allowed to drink a little now and then, as opportunity offers, and this will greatly refreſh him; but you ſhould never let him drink much at a time, for

if you ſuffer him to drink his fill, he will become dull and ſluggiſh; and beſides, if he be very hot, it may be attended with very bad conſequences. However when you come within a mile and a half, or two miles of the place you intend to bait at, either at noon or night, he may drink more freely, going in a moderate trot afterwards, for by this means the water will be well warmed in his belly, and he will go in cool. Yet, carefully obſerve, that if there has been no water, or he has not drank on the road, never ſuffer your horſe to be led to water, or to have his heels waſhed immediately after you arrive at your inn; but let him have water luke warm after he has ſtood ſome time in the ſtable; for much miſchief has been frequently done by imprudent riders, who after having travelled hard, have let their horſes drink as much as they would, juſt after going into the inn or town where they intend to lie.

Theſe obſervations relating to currying, feeding and watering your horſe, if carefully obſerved, will be of great ſervice, and contribute more than any thing elſe to preſerve him in perfect health.

How to ſave a Horſe's Back from galling.

YOung horſes that have not been uſed to have their backs preſſed, are moſt ſubject to gall and warble, and therefore we cannot take too much pains in fixing the ſaddle and ſuiting it to the ſhape of the back, that it may bear as equally as poſſible upon all parts at the ſame time.

As ſoon as an inflamation is found to be coming on, which may be known by ſome places under the ſaddle ſweating, or continuing moiſt longer than others, eſpecially if the back be viewed ſome hours after the ſaddle has been taken off, theſe places ſhould be eaſed by removing the ſtuffing, that the weight of the rider may preſs upon other parts that are not ſo much heated. Vinegar, urine, ſalt and water, &c. are frequently uſed to cool a horſe's back that has been hurt by being overheated; but if the skin be broke in holes, it would be better to uſe equal quantities of ſpirit of wine and tinc-

ture of myrrh and aloes, with a little oil of turpentine and bathe the place with it now and then. There will be ſmall holes in theſe tumours (which are called warbles) before ſome people would imagine it; but if you uſe the ſaid tincture, you may proceed on your journey; you ought however to look frequently at your horſe's back, and not hing upon him ſo as to make the inflamation ſpread. It would alſo haſten the cure if you would every hour walk a while on foot, and bathe the horſe's back with vinegar, or any thing elſe that is an enemy to putrefaction.

On the Navel-Gall.

THE ſwelling called the Navel-gall is a tumour on the vertebræ, or bone of the back, and is occaſioned by a contuſion of the ſaddle tree, which for want of ſtuffing the pannel, it has rubbed and fridged the horſe's back. To prevent this you ſhould frequently, when riding, put your fingers before and behind your ſaddle, to feel whether it pinches the horſe, that you may remedy this diſorder in time, by getting your ſaddle chambered, or hollowed, to prevent its preſſing the grieved part. But when, through the negligence of the rider, the horſe happens to be cruſhed either before or behind the ſaddle, and that it ſwells much, you ſhould (as in all other tumours occaſioned by bruiſes) endeavour to diſperſe it, by applying warm, greaſy poultices, as ſcalded bran and hog's lard, boiled turnips or the like. Tho' if the bruiſe be ſlight, it may yield to cold applications, as whites of eggs, wheat flower, bole armoniac and vinegar laid thick upon a piece of leather, larger than the ſwelling, and renewed as it dries; but if the hurt be very ſlight, the humour may be diſperſed by waſhing the place with vinegar, or ſalt and water.

How to cure a Cruſh on the Navel-gall.

A Cruſh on the navel-gall frequently becomes what is termed an encyſted tumour; the matter that

forms it is contained in a ſtrong skin or bag; and this kind of ſwelling frequently remains for years after the hurt is received, unleſs they are carefully cut out by the farrier. The method of cure is to make a long inciſion, and to cut out the bag of matter, skin and all, and then to heal the wound with the following ointment.

The common Wound Ointment.

Take common turpentine, half a pound; honey, one pound and a half; Burgundy pitch, twelve ounces; and hog's lard, half a pound: melt theſe well together; and when it has been taken a while from the fire, ſtir in an ounce of French verdigreaſe in fine powder and keep ſtirring till it is as thick as honey, or, till the powder cannot ſink to the bottom.

Of ſwelled Legs.

SWelled legs in horſes is one of their moſt common grievances, and it muſt be acknowledged that ſome are by far more apt to ſwell in the legs than others; but when a horſe's legs ſwell and will not yield to good keeping, clean dreſſing, &c. without the help of medicines, the caſe is bad; but the following purge may be of ſervice.

Take one ounce of common aloes, half an ounce of diapente, three drams of ſpecies hicre-picræ, one dram of diagridium, 100 drops of oil of aniſeed, and as much treacle as will made it into a ſtiff ball, to be rolled in liquoriſh powder or flower of brimſtone, and give the horſe in the common way, working it off with warm water and oat meal, when the medicine begins to operate.

The above doſe, with reſpect to the quantity of the aloes and diagridium, may be enlarged or diminiſhed according to the horſe's age and ſtrength; but it is not ſafe to increaſe the diagridium above the quantity of two drams; but a horſe that is lean and weak ſhould only be once or twice purged with the following preparation,

and afterwards he ſhould take ſtrengthening medicines to reſtore his fibres to their natural tone and elaſticity.

Take of ſuccotrine aloes, one ounce and an half, extract of caſſia, one ounce; of ſenega in powder, three drams; cinnamon, cloves, nutmegs and galengal root, powdered, of each two drams; mix and with as much ſyrup of roſes-ſolutive as is neceſſary, beat the whole into a ſtiff maſs to be formed into two balls, which are to be given the horſe in a morning, waſhing him down with a little warm ale, keeping him from his meat at leaſt half a day.

If your horſe is ſtrong and full of fleſh, and really requires purging, he may in ſuch caſe bear the common aloes: but it is a neceſſary caution, that, when the firſt doſe does not purge, a ſecond ſhould not be immediately given; for by this management many horſes have loſt their lives: and it is a general rule, always to keep under the common doſe of any medicine, till we are throughly acquainted with the temparament and conſtitution of the creature we have to deal with.

Of the Scratches.

THE ſcratches are a painful diſtemper, and in many reſpects are agreeable to what is termed kibed heels in human bodies; and this generally proceeds from the careleſneſs and naſtineſs of the groom; ſo the greaſe is moſtly occaſioned by his negligence, in ſuffering the ſcratches to grow to too great a height. Yet, according to D. Bracken, the ſcratches differ from the greaſe, in that the firſt require reſt, a large ſtall, and proper ointment, whereas the greaſe (without the ſcratches) is better, after moderate riding. Experience informs us, that motion prevents the cloſing of all kinds of wounds; and it is equally certain that an horizontal poſture of the body or limb wounded, is greatly preferable to a depending one; for theſe reaſons, a ſore on the back part of the fetlock, the part where the greaſe and ſcratches happen, requires care and patience. For this reaſon, if a horſe who has the greaſe or ſcratches, or wounds or ſwelling in the legs, will not lie down, he muſt ei-

ther be forced to it; or covered with a cloth and turned out in the day; for when a horſe is turned out from a warm ſtable into a field, the coolneſs of the air cauſes ſuch a contraction of the fibres and the muſcular parts as puts a ſtop to the influx of the humours, by which means an inflammation and ſtagnation of the blood and juices are prevented: but before he is turned out, his heels ought to be well waſhed with warm water, and anointed with the following ointment.

An Ointment for the Scratches.

Take of white ointment, two ounces; Flanders oil of bays and quickſilver, each half an ounce: melt the white ointment a little; then ſtir in the oil of bays, and then ſtir in the quickſilver, and keep ſtirring till all be ſo cold that the laſt ingredient cannot ſink to the bottom.

N. B. Before this ointment is applied the hair ſhould be clipped away from the ſores, the legs waſhed perfectly clean with pretty warm water, and the part well dried.

Dr. Bracken aſſerts, that inward medicines are not abſolutely neceſſary in the cure of the ſcratches or greaſe, and aſſures us, that he durſt undertake to cure theſe diſorders ſooner by turning out, good feeding, clean dreſſing, and letting the horſe have a double ſtall in which he may lie at his eaſe, than by any other method whatſoever,

Of Gravel in the Hoof.

IF a ſmith drives a nail into the quick, it naturally becomes feſtered and inflamed, and the ſand or gravel in the roads working up the nail hole, render him perfectly lame: and it is a general rule, that whenever any foreign matter happens to be lodged in any part of the animal machine, it ſhould be taken out as ſoon and as carefully as poſſible. The greateſt care ſhould be taken not to cut, pare, or ſcrape the hoof more than is neceſſary, it being ſufficient to cut away what is black

and diſcoloured, and then to dreſs the wound with the following balſam.

Vervain's famous balſam for curing Wounds or Pricks.

Take balſam of Peru, half an ounce: gum Benjamin, half an ounce; ſtorax, three drams; ſucceotrine aloes, three drams; choice myrrh, ſix drams; powder them; and after putting them into a wide mouthed pint gooſeberry bottle, pour upon them one pint of rectified ſpirit of wine, and corking it looſely, ſet the bottle in ſand in an iron pot over a middling fire, keeping the ſpirit pretty warm for 24 hours; after which you may keep it cloſe ſtopped, and decant it off clear as you want it.

The method of applying this excellent compoſition, is, to dip into it a piece of lint or tow, and then faſten it on the part, cleared of the gravel, &c and renew is as it grows dry. But if this cannot be eaſily procured, the part may be dreſſed with the following ointment.

An Ointment for a gravelled Horſe.

Take of turpentine, two ounces; roſin and Burgundy pitch, of each an ounce; bees wax, an ounce and a half; freſh butter four ounces; French verdigreaſe finely powdered, half an ounce; clarify the butter, and after melting the hardeſt ſubſtances firſt, put in the other, and laſt of all the powdered verdigreaſe; and ſtir the whole about till it is almoſt cold, otherwiſe the ointment will be more ſharp at the bottom than at the top.

On a Clap in the Back-Sinew.

A Clap, or more properly a ſtrain in the back-ſinew, is frequently occaſioned by a horſe's getting his foot into a hole in the road, when having a heavy load on his back, he often catches himſelf ſo haſtily upon ſtumbling, that he ſtrains the back ſinew or tendon behind his fore leg. This diſorder is frequently miſta-

ken by the farriers for a ſhoulder ſlip; but captain Burdon gives a very good rule to diſtinguiſh the difference. If the back ſinew be ſlipt, ſays he, the horſe will lift his toe off the ground and ſtep ſhort; but if the ſhoulder, he will drag his toe as he walks.

The cure of a ſtrain in the back ſinew is beſt accompliſhed by cooling applications, and will be much ſooner effected if your horſe will lie down and eaſe his leg. When the diſorder is ſlight, this alone will be ſufficient.

A Cure for a Clap or Strain in the Back-Sinew.

Take four ounces of bole armoniac, and ten whites of eggs: ſtir theſe well, and add thereto as much ſtrong red or white wine vinegar as will reduce it to the conſiſtence of a pretty ſtiff poultis; and then after the leg has been well bathed and waſhed with warm water, and wiped dry with an eaſy hand, ſpread the preparation on thin leather all along the ſinew and part affected. This muſt be repeated as it dries.

Sir William Parſon's Receipt for the cure of a Strain, either of the Back-Sinew or the Shoulder.

Take common Barbadoes aloes, diſſolved in as much hot water as will make it of the conſiſtence of a plaiſter; when ſpread on a piece of thin leather, apply it to the part affected, and bind in eaſily on.

A Receipt for a Shoulder Slip.

Take oil of turpentine, two ounces; oil of ſwallows and petrolium, of each half an ounce; mix theſe together, and having heated the ſhoulder and opened the pores of the skin, by holding a flat iron petty hot, at about a ſpan diſtance, let it be well rubbed in.

Strains frequently happen on a journey, without any ſenſible heat or ſwelling, ſo that the part affected is frequently miſtaken by the farriers; but in all caſes of ſtrains, it is abſolutely neceſſary to ſuffer the horſe ei-

ther to reſt intirely, or to make ſmall and eaſy ſtages; for where accidents of this kind happen, nothing can be worſe than motion. The common practice of rowelling for ſtrains, according to Dr. Bracken, is of no real ſervice: ſince, tho' the lameneſs goes off after rowelling, it is not the number of rowels, but the reſt from buſineſs and the length of time that perform the cure.

Of Strains in the Fillets.

WHen a horſe has a ſtrain in the fillets, it may be known by his dragging his hinder feet after him, his hitting his toes on the ground, and his wriggling as if he would fall. The age of the horſe and the violence of the ſtrain will render the cure the longer in performing.

A Receipt for a Strain in the Fillets.

Melt ſome pitch, roſin, and turpentine together, and pour it all over the fillets pretty warm, and then clap over it a parcel of tow.

For Strains in the Fetlock.

Take the lees of wine, either red or white, or wine vinegar to the quantity of about half a pint, and add thereto one pound of common bole armoniac in powder; to theſe put the whites of ſix eggs; beat all well together, and apply it thick in the manner of a poultis, and renew it as it dries. If the powder be too much or too little for the wine lees, it may be altered ſo as to make it of the conſiſtency of thick honey.

Of Windgalls.

THE cure of windgalls chiefly conſiſts in cooling the parts, and ſuffering the horſe to lie idle rather at graſs than in the houſe. The above charge for ſtrains in the fetlock may be of great ſervice. Or, the fetlock joints may be rubbed now and then with tar.

Of Colds.

Colds generally proceed from giving cold water to horſes, when hot, or in letting them cool too ſuddenly; and many horſes have become phthiſicky and even broken winded, by being rid, when in a ſweat, belly deep in cold water. Colds generally affect thoſe parts of the body which are moſt ſuſceptible of impreſſion, as the brain, lungs, and guts of animals; for when that matter which ought to be perſpired, is retained in the blood, by the cloſing of the pores of the ſkin, nature endeavours to throw off what is hurtful, by other outlets, ſuch as the noſe, mouth, fundament, urine, &c. and therefore it is the buſineſs of the phyſician and the farrier to aſſiſt nature in promoting ſome of theſe diſcharges. And therefore when a cold is violent, as an over great fulneſs is brought on from the perſpirable matter lodged in the veins being obſtructed, bleeding muſt be highly proper. But there is nothing better for a horſe that has got a cold, than the following cordial ball.

A cordial Ball for Colds, proper to prevent or cure moſt Diſeaſes in Horſes, when there are no ſymptoms of a Fever.

Take aniſeed and caraway ſeed, finely powdered, of each one ounce; greater cardamum ſeed, half an ounce, flower of brimſtone, two ounces; turmerick, in fine powder, one ounce; ſaffron, two drams; ſugarcandy, four ounces; Spaniſh liquoriſh diſſolved in hyſſop water, two ounces; oil of aniſeed, half an ounce; liquoriſh powder, one ounce and an half; wheat flour, as much as is ſufficient to make all into a ſtiff paſte; and when the whole has been well beaten in a mortar, it may be tied up in a bladder, and kept for uſe.

This ball, when uſed for a cold, muſt be diſſolved in ſtale beer, milk-warm, and about one ounce for a doſe, given twice a day for the ſpace of a fortnight; or elſe,

inſtead of diſſolving it, it may be put between his grinders, when you ſhould let him chew upon it for an hour or two without eating hay or graſs, and afterwards give him oatmeal and water lukewarm, ſtirring them gently about both before and after watering.

If a horſe ſeems griped in the guts from the ſame cauſe, let him have the following warm drink given him.

A cordial Drink in a Cold.

Take two ounce of the above ball, half an ounce of grains of paradiſe, in powder, and a quarter of an ounce of long pepper, with a large nutmeg grated, and mix all up with a quart of ſtrong mellow ale, and give it the horſe in a horn, and then keep him tied up from food for two hours; but firſt he muſt be rid about a little, on a full trot, to ſhake his guts, and let looſe the impriſoned wind.

If the horſe is bound in his body, about twelve hours after his taking the above cordial drink, you may give him the following clyſter.

A Clyſter for Griping in the Guts.

Take mallow leaves and pellitory of the wall (either green or dried) of each three handfuls, caraway ſeeds bruiſed, and aniſeeds, of each one ounce, ground ginger, half an ounce, the electuray called caryocoſtinum, one ounce, boil the herbs and ſeeds well in two quarts of water, to three pints, then add the ginger and the electuary, and put a quarter of a pound of freſh butter, and one ounce of Epſom ſalt to the whole. Let this be injected very warm, and the horſe's tail tide down between his thighs for a good while.

In caſe the guts are actuated with painful twitches and convulſive contractions, which makes the horſe tumble about and ſtrike his feet againſt his belly, to the above clyſter may be added, half an ounce of philonium romanum.

Theſe remedies, together with care and patience, warm maſhes of malt, bran, and the like, will reſtore your horſe to health; but obſerve that he ought to have a wide ſtall, and clean, warm bedding.

Another excellent Receipt for the Cure of Gripes.

Take twenty grains of London laudanum, diſſolve it in an ounce of brandy, then mix it with a pint of white wine, and add two ounces of diaſcordium; give it your horſe in a born milk warm, and clothe him well. Let him reſt twenty four hours after it, and drink plentifully of warm water and oatmeal for he will be very thirſty the day after he has taken it.

On Scouring, or immoderate Purging.

SCouring or purging on the road may be remedied by keeping the horſe to dry food and leſs water than common; but this muſt be continued for a long time, with proper exerciſe, and a full allowance of oats and ſplit beans.

A horſe of a lax conſtitution being taken from graſs to go a long journey, ſhould have the following preventive phyſic given him in his provender.

A powder againſt Scouring or over Purging.

Take galls, powdered (ſuch as we make ink with) two ounces, and of the powders of Japan earth and Lemnian earth, of each an ounce; mix, and keep them in a bladder for uſe. The method for uſing it is to ſprinkle a little water upon the horſe's oats, and after rubbing them a while, to throw amongſt them half a ſpoonful of the powder.

If a horſe from foul feeding, catching cold, &c. purges upon the road, give him the following drink.

A Drink for a Horſe which ſcours from foul feeding, &c.

Take one ounce of Venice treacle, boil it in a quart of ſtale beer till one third is evaporated, then add half an ounce of true Armenian bole in powder, and two ounces of common treacle to make it palatable; then give it the horſe in one doſe, and repeat it as neceſſity requires. If it be too weak to overcome the diſtemper, an hundred drops of liquid laudanum, and half a gill of ſtrong cinnamon water may be added; but in the laſt caſe he ſhould not travel for ſome days.

On a cold in the head.

WHEN the brain is much loaded from the cold, take ſome of the following powder, and blow it through a piece of elder wood, pretty high up the noſtrils.

A powder to make a Horſe's Noſe run in a cold.

Take aſſarabacca * dried, half an ounce, and of the powder of margerum, one ounce, mix theſe together, and blow it up the horſe's noſtrils twice or three times a day, keeping his head and throat well covered, to prevent his getting more cold.

As the eyes are ſubject to various accidents on the road, particularly from the cut of a whip, a remedy for theſe diſorders cannot be unneceſſary. All wounds on the eye, if curable, will yield to the following application.

A Receipt for Curing Wounds on the Eyes.

Take half an ounce of the greyiſh coloured lapis ca-

* *This is an herb ſhaped like the garden ſcurvy graſs, only it is larger, and of a darker green.*

laminaris, finely powdered, of lapis tutiæ, two drams, of white vitriol, burnt, one dram and a half, and about one ſcruple of French verdigreaſe, reduce theſe into a fine powder, and mix them well with about one ounce of freſh butter. When you make uſe of it, warm this ointment, dip a feather in it, and apply it morning and evening to the ſore. This muſt be continued for a good ſpace of time, becauſe wounds on the eyes are long in healing.

Or when the horſe's eye happens to be hurt with a laſh of a whip or twig, you may blow in the following powder night and morning.

For a Hurt on the Eye.

Take of lapis calaminaris and lapis tutiæ, finely powdered, of each two drams, white vitriol and allum, firſt powdered and then burnt together, in a very clean, red hot fire ſhovel, each half an ounce, mix all theſe together, and keep the whole in a bottle well corked; but obſerve, that the bottle ought not only to be dry, but well warmed before you put it in.

If the eyes be rheumy and bloodſhot, and the horſe has ſymptoms of pain in his head, bleeding will be neceſſary, and the following eye water may be applied.

An excellent Eye-Water.

Take four ounces of roſe water, and about three drams of the aforeſaid eye-powder mixed and diſſolved in it; ſquirt it into the eyes by the help of a ſyringe.

The water is beſt for rheumy bloodſhot eyes, where there is no ſpeck or film; and the powder where there is; but obſerve the eye always looks worſe while the powders are uſing.

A Cure for a Swelled Neck.

When a horſe's neck happens to ſwell by getting cold after bleeding, the following ſoftening poultice is the beſt thing that can be applied.

Take mallow and marſh mallow leaves picked clean from the ſtalks, of each ten handfuls, white lilly roots, half a pound ; lintſeed and fenugreek ſeed, of each two ounces, ointment of marſh mallows, ſix ounces, and of hog's lard, half a pound. The leaves and roots ſhould be boiled well, and the water preſſed from them ; then beat them up to a pulp in a mortar, and let it ſtand till you have made a jelly of the ſeeds by bruiſing them well, and boiling them in a quart of water to a pint ; this you muſt beat up with the former ; and laſtly add the ointment and hog's lard, and when all are mixed thoroughly, it may be kept in a large bladder or pot for uſe.

This is an excellent poultice for all hard ſwellings either in man or beaſt : when applied, it ſhould be warmed well before the fire, ſpread thick over a piece of flannel applied all over the tumour, and renewed as it becomes dry.

If a ſwelling of a horſe's neck, after bleeding will not diſperſe, it ſhould be opened when ſufficiently ſoft, and dreſſed with the common wound ointment, before recommended for healing the navel gall, and the poultice continued till the hardneſs is diſſolved.

When a horſe is under cure for theſe kind of ſwellings, it is beſt to give him maſhes of malt, warm grains, and warm water, with a good deal of oatmeal in it, and if he will eat a little hay, it ſhould be ſweet, ſoft, meadow hay, ſprinkled with cold water ; or, in ſummer cut graſs.

A Receipt to cure Worms.

The beſt remedy for the cure of worms is æthiops mineral, which ought to be thus prepared. Take four ounces of flower of brimſtone, and the like quantity of

quickſilver; melt the brimſtone ſlowly in an iron laddle, and ſtir in the quickſilver over a gentle heat, till it is incorporated; then take it off, and ſtir it till almoſt cold; afterwards ſtir them well together in an iron or ſtone (not a braſs) mortar, till they become a black powder. Give the horſe as much as will lie on a half crown piece twice a day in his corn, which muſt be firſt wetted to make the powder ſtick to it. This medicine muſt be continued a week or longer.

A Remedy for the Gravel.

If your horſe has the gravel in his kidneys, ureters, or bladder, he will ſeem weak in the fillets, ſtale often, and with difficulty, and but little at a time.

Take an ounce and an half of the cordial ball above mentioned: ſope of tartar, one dram; of Matthew's pill, one dram; or if the horſe be luſty and ſtrong, a dram and a half; beat thoſe well together, and with liquoriſh powder make it up into two balls, and mixing it with a little ſtale beer and ſome treacle, give it for a doſe out of a horn.

This medicine, if the ſymptoms are violent, may be repeated once in twenty four hours; and every two or three hours water lukewarm ſhould be offered him.

THE

ART of PAINTING in Oil.

To which is added, the whole Art of Gilding with Gold and Silver, mixing Water-Colours, &c.

A catalogue of the ſeveral Colours uſed in Painting with Oil.

WHITES.

THE principal of all whites is white lead.

Of this colour there are two ſorts, the one called ceruſe, which is the moſt pure and clean part, the other is called by the plain name of white lead.

Beſides white lead and ceruſe, there is another ſort to be met with ſometimes, which they call ſlake white.

BLACKS.

Lam black.
Lamp, or candle black.
Ivory black.
Willow charcoal.

REDS.

Vermilion is the moſt delicate of all light reds, being of itſelf a perfect ſcarlet colour.

Lake, eſpecially the richeſt ſort, is the beſt of all dark reds, being a moſt pure crimſon.

Red lead is the lighteſt of all reds now in uſe; 'tis a ſandy, harſh colour, and ſuch a one as is not eaſily ground very fine, altho' you beſtow much labour on it.

Spaniſh brown is a dark, dull red, of a horſe-fleſh colour, 'tis an earth, it being dug out of the ground, but there is ſome of it a very good colour, and pleaſant enough to the eye, conſidering the deepneſs of its colour: it is of great uſe among painters, being generally uſed as the firſt or priming colour, that they lay upon any kind of work, being cheap and plentiful, and a colour that works well, if it be ground fine, as you may do with leſs labour than ſome better colours do require; the beſt ſort is the deepeſt colour, and freeſt from ſtones; the other ſorts are not ſo good to give a colour to the eye, but yet they ſerve as well as any others for a priming colour.

YELLOWS.

Yellow oaker is of two ſorts, one called plain oaker, and the other ſpruce oaker, the one is a much lighter colour than the other.

Pink yellow.

Orpiment is that colour which ſome call yellow arſenick.

Maſſicote is a good light yellow for moſt uſes, eſpecially in making greens, of which ſeveral ſorts may be framed out of this colour being mixed with blue.

GREENS

Verdigreaſe is the beſt and moſt uſeful green of all others.

Green bice is of a ſandy nature, and therefore not much uſed; green verditer is alſo a ſandy colour; neither of them bear any good body, and are ſeldom uſed but in landſkips, where variety is required.

BLUES.

Blue bice bears the beſt body of all bright blues uſed in common work, but 'tis the paleſt colour.

Blue verditer is a colour of no good body, but ſomething ſandy, and of no very good colour itſelf, being apt to turn greeniſh, and being mixt with a yellow makes a good green.

Indigo is a dark blue, if worked by itſelf, to remedy wlſich, whites are uſually mixt, and then it makes but a very faint blue.

Note, That the longer this colour is ground, the more beautiful and fair it looks.

Smalt is the moſt lovely blue of all others.

Note, That of this colour there are two ſorts, the fineſt is that which is called oil ſmalt.

Umber is a colour that really has no affinity with the others above mentioned, being neither white, black, red, yellow, blue or green, yet it is a colour of as great uſe as any of the reſt in common painting.

How to make a SIZE for the Gilding both with GOLD and SILVER.

THE operation is thus, for the making of Gold ſize: Take yellow oaker, and grind it on a ſtone with water till it be very fine, and afterwards lay it on a chalk ſtone to dry; this is the common way: or you may waſh your oaker, for when it is waſhed, to be ſure nothing but the pureſt of the colour will be uſed; and beſides 'tis done with leſs daubing.

When your oil and oaker are thus prepared, you muſt grind them together as you do other oil colours, only with fat drying oil, but it is ſomewhat more laborious, and muſt be ground very fine, even as oil itſelf: for the finer it is the greater luſtre will your gold carry that is laid on it.

Here note, that you muſt give it ſuch a quantity of your fat oil, that it may not be ſo weak as to run when you have laid it on; nor ſo ſtiff that it may not work well; but of ſuch a competent body, that after it is laid on, it may ſettle itſelf ſmooth and gloſſy, which is a chief property of good ſize.

Silver ſize is made by grinding white lead with fat drying oil, ſome adding a little verdigreaſe to make it bind.

The practice of working oil colours, and painting timber-work, after the manner of common painting.

THAT which I here call common painting is only the way and manner of colouring all manner of wainſcot, doors, windows, poſts, rails, pails, gates, border boards for gardens, or any other materials that require either beauty or preſervation from the violence of rain, or injury of weather; the method of doing which I ſhall lay down as plain as I can. Suppoſe then, that there be a ſet of paliſadoes, or a pair of gates, or ſome poſts and rails to paint, and I would finiſh them, in a ſtone colour: firſt look over the work, and take notice whether the joints be open in the gates, or whether there be any large cleſts in the poſts, for if theſe are not ſecured the wet will inſinuate itſelf into the defects, and make the quicker diſpatch in ruining the whole work; let the firſt buſineſs therefore be, to ſtop up theſe places ſmooth and even, with a putty made of whitening and lintſeed oil, well beaten together on the grinding ſtone, with a wooden mallet, to the conſiſtence of a very ſtiff dow, and with this let all the crannies, cleſts, and other defects be perfectly filled up, that it may be equal to the ſurface of the ſtuff, then proceed to the priming of the work with ſome Spaniſh brown well ground and mixt very thin with lintſeed oil; with this do over the work, giving it as much oil as it will drink up; this in about two days will be indifferent dry, then if you would do the work ſubſtantially, do it over again with the ſame priming colour; when this is thorough dry, then take the white lead well ground and tempered up, not too thin, for the ſtiffer you work it, the better body will be laid on, and the thicker coat of colour that your timber is covered withal, the longer it will laſt; let this colour be well rubbed on, and the whole ſurface of the work be ſo intirely covered, that there remain no creek nor corner bare, which you may eaſily do by jobbing in the point of a brittle bruſh; let this firſt colouring dry, and then go over it a ſecond time, and if you pleaſe a third alſo; the charge will be a little more, but the advantage will be much more great

This courſe is ſufficient for any kind of timber work that requires only a plain colour; whether you thus cover the work with a ſtone colour, or elſe with a timber colour in umber and white, or a lead colour in indigo and white, that with white being the cheapeſt of the three by much; nay, I have known ſome lay over their work only with a coat of Spaniſh brown, by tempering it up more ſtiff than was done for the firſt two primings, which in ſome reſpects is cheapeſt of all, and preſerves the timber perhaps as well as any. Now he that is able to bring the work thus far on has proceeded to the higheſt pitch of that common painting that aims at preſervation beyond beauty, though ſomething of beauty is neceſſarily included in this alſo; but this is not all, for he that is arrived thus far, is in a fair way to other perfections in the art of painting: but for the pannelling of wainſcot with its proper ſhadows, and for imitating olive and walnut wood, marble and ſuch like; theſe muſt be attained by ocular inſpection, it being impoſſible to deliver the manner of the operation by precept without example, and I am bold to affirm, that a man ſhall gain more knowledge by one day's experience than by a hundred ſpent to acquire it ſome other way.

I adviſe therefore all thoſe that deſire any inſight into this buſineſs, to be a little curious, if opportunity offers, in obſerving the manner of a painter's working, not only in grinding his colours, but alſo in laying them on. and working them in; in all theſe obſerving the motion of his hand, in managing of any kind of tool, and by this means, with a little imitation, joined to the directions here given; I doubt not but in a ſhort time you may arrive to great proficiency in the buſineſs of common painting.

Note, That if when you have made uſe of your colours, there be occaſion for a ſmall ceſſation till the work be finiſhed; in this caſe 'tis beſt to cover the colours in your pots with water, for that will prevent their drying, even in the hotteſt time.

And for your pencils they ought, ſo ſoon as you have done working, to be well waſhed out in clean linſeed-oil and then in warm ſoap ſuds; for if either oil or

colours be once dried in the bruſh or pencil, 'tis ſpoiled for ever.

It has been obſerved, that timber laid over with white, when it has ſtood ſome time in the weather, the colour will crack and ſhrink up together, juſt as pitch does, if laid on any thing that ſtands in the ſun; the cauſe of this is, that the colour was not laid on with a ſtiff body, able to bind itſelf on firm and faſt.

If you ſhall at any time have occaſion to uſe either bruſhes that are very ſmall; or pencils, as in many caſes there will be occaſion, you ought then to diſpoſe of the colours you uſe upon a pallet (which is a wooden inſtrument, eaſy to be had at any colour ſhop) and there work and temper them about with your pencil, that the pencil may carry away the more colour; for you are to note, that if a pencil be only dipt into a pot of colour, it brings out no more with it than what hangs on the out ſide, and that will work but a little way, whereas if you rub the pencil about in the colour, on the pallet, a good quantity of colour will be taken up in the body of the pencil; and beſides all this, you may work your pencil better to a point on a pallet, han you can do in a pot; the point of a pencil being of greateſt uſe in divers caſes, eſpecially in drawing of lines and all kind of flouriſhing.

What COLOURS are moſt ſuitable, and ſet off beſt one with another.

BY ſetting off beſt, I mean their making each other look moſt pleaſant, for two of ſome particular colours put together, or one next the other, ſhall add much to the beauty of each other, as blue and gold, red and white, and ſuch like: but green and black, put together, look not ſo pleaſant, neither do black and umber, or haw colour, and ſuch like.

All yellows then ſet off beſt with blacks, with blues, and with reds.

All blues ſet off beſt with whites and yellows.

Greens ſet off well with blacks and whites.

Whites ſet off well enough with any colour.

Reds ſet off beſt with yellows, whites and blacks.

Gold looks well upon a white ground, eſpecially if the matter to be gilt be carved.

Gold and black ſhew alſo very well.

Gold on timber colour ſhews alſo very well.

So does gold and horſefleſh colour, made with the brighteſt Spaniſh brown.

But the moſt glorious ground of all others for gold are the vermilion red, the ſmalt blue, and the lake, laid on a light ground.

Of ſome colours that ariſe from mixture.

Aſh colour is made of white lead and lam black; if a deep aſh colour, then take the more black, but if a light one, then take but little black, and moſt white.

A lead colour is made of indigo and white.

A colour reſembling new oaken timber, is made of umber and white lead.

A fleſh colour is compounded of lake, white lead, and a little vermilion.

A buff colour, take yellow oaker, and white lead.

For a willow green, take verdigreaſe alone.

For a light willow green, take verdigreaſe and white.

For a graſs green, take verdigreaſe and pink.

A carnation is made of lake and white.

Orange colour, yellow oaker and red lead.

A light timber colour, mix ſpruce oaker and white, and a little umber.

Brick colour, red lead, a little white and yellow oaker.

For a ſtraw colour, take white and a little yellow oaker.

Olive wood is imitated with oaker and a little white, veined over with burnt umber.

Walnut tree is imitated with burnt umber, and white veined over with the ſame colour alone, and in the deepeſt places with black.

Pails and poſts are ſometimes laid over only with white, which they call a ſtone colour.

Sometimes poſts and pails are laid over with indigo and white, which is called a lead colour.

Window frames are laid in white if the building be new, but if not then they are generally laid in a lead colour, or indigo and white, and the bars with red lead.

Doors and gates, if painted in pannels, then the ſhadow of a white ground are umber and white, but if laid in a lead colour, then the ſhadows are liſted with black.

'Tis not poſſible to ſet down all thoſe varieties of colours that may be produced by mixture; they that would ſee more, may peruſe Dr. Salmon's polygrafice, where they ſhall find great variety. But thoſe which I here have given an account of, are ſufficient for common painting.

How to gild with GOLD on an oily Size, either Letters or figures, &c.

WHATSOEVER you would gild muſt firſt be drawn with gold ſize (the making of which has been mentioned) according to the true proportion of what you would have gilt, whether figure, letter, or whatever elſe it be; when you have thus drawn the true proportion of what you would have gilt, let it remain till it be ſufficiently dry to gild upon, which you ſhall know by touching it with the end of your finger; for if your finger ſtick a little to it, and yet the colour come not off, then it is dry enough; but if the colour come off on your finger, then it is not dry enough, and muſt be let alone longer; for if you ſhould then lay your gold on, it would ſo drown it, that it would be worth nothing: but if your ſize ſhould be ſo dry as not to hold your finger as it were to it, then it is too dry, and the gold will not take; for which there is no remedy but new ſizing; therefore you muſt watch the true time that it be not too wet or too dry; both extremes being not at all convenient.

When your ſize is ready for gilding, take your book of leaf gold and opening a leaf of it, take it out with your cane plyers, and lay it on your gilding cuſhion, and if it lie not ſmooth, blow on it with your breath, which

will lay it flat and plain, then with a knife of cane, or for want of it, an ordinary pocket knife that hath a ſmooth and ſharp edge; with this being wiped very dry on your ſleeve that the gold ſtick not to it, let your leaf gold be cut into ſuch pieces, or forms, as your judgment ſhall think moſt ſuitable to your work.

When you have thus cut your gold into convenient forms, then take your gilding pallet, ('tis a flat piece of wood, about three inches long, and an inch broad, upon which is to be glewed a piece of fine woollen cloth of the ſame length and breadth) and breathe upon it to make it dampiſh, that the gold may ſtick to it; with this tool take your gold up (by clapping it down on the ſeveral pieces you had before cut into forms) and transfer it to your ſize, upon which clap it down according to diſcretion, and your gold will leave your tool, and cleave to your ſize; which you muſt afterwards preſs down ſmooth with a bunch of cotton, or a hare's foot; and this you muſt do piece by piece till you have covered all your ſize with gold; and after it is fully dried, then with your hare's foot bruſh off the looſe gold, ſo will your gilding remain fair and beautiful.

If your work to be gilt is very large, open your book of leaf gold, and lay the leaf down on your work without cutting of it in pieces, and ſo do leaf by leaf till you have covered quite over what you intend to gild: and if ſome particular places ſhould miſs there, take up with a ſmall bunch of cotton a piece of leaf gold, cut to fit a ſize, and clap it on, that the work may be entirely covered; and if the gold be to be laid in the hollows of carved work, you muſt take it up with the point of a camel hair pencil, and convey it in, and with the ſaid pencil dab it till it lie cloſe and ſmooth.

How to gild with SILVER.

IN laying on ſilver upon an oily ſize, the ſame method in all reſpects is required as for gilding with gold; ave only in this, that the ſize upon which ſilver is laid

ought to be compounded of a very little yellow oaker, and much white lead; for the ſize being of a light colour, the ſilver laid on it will look more natural, and retain its own colour better, the whiter the ſize is.

Note, That the common painters do now generally in gilding uſe more ſilver than gold, in moſt works that are not much expoſed to the air, to which they afterwards give the colour of gold, by means of the lacker-varniſh, whoſe uſe is now ſo common, that if they gild any thing that ſtands free from the weather, they only gild with ſilver, and ſo give it the colour of gold with a lacker varniſh, made of gum lack, diſſolved in ſpirit of wine and laid over it.

Some DIRECTIONS for mixing of Oil Colours for divers Purpoſes, in the Art of Colouring Print with Oil Colours.

Colours for ſeveral Faces.

FOR faces that are accounted fair, take white lead, a little vermillion and a very ſmall touch of lake.

For the lips take more of the vermillion and lake than you did for the faces.

For a brown face, take burnt oaker and white.

For a tawny Moor, take cullens earth, a little burnt oaker, and a little white.

Colours for Hair.

For a brown hair, mix umber and a little black and white.

For a yellow hair, take ſtone oaker, white lead and a little vermillion.

For flaxen hair, take white lead, ſtone oaker, and a little cullens earth

Linnen is done with white lead and ceruſe.

Silver is done with white, a little ſmalt, and ſome white maſticote.

Gold is done with red orpiment and white maſticote, of each an equal quantity.

Colours for Graments.

For blue garments the beſt ſmalt and white lead.

For a graſs green, mix verdigreaſe and a little pink-yellow.

For a willow green, mix verdigreaſe and a very little white.

A ſea green is made by mixing green verditer, pink, and white lead.

A French green is made by mixing pink and indigo.

A carnation by mixing lake and white lead.

A crimſon is made by mixing vermillion, lake and white.

A ſcarlet is only vermillion laid on alone.

A cherry colour is made by mixing vermillion and white lead.

For yellow, lay on either yellow orpiment, or yellow maſticote; if your yellows are more pale, then mix white with the former.

For an orange colour, mix red orpiment and a little vermillion.

For a purple, mix ſmalt, lake and white.

For a violet, mix bice and lake.

A ſtraw colour is made with white and yellow oaker, and a very little umber.

An aſh colour is made by mixing black and white.

A cheſnut colour is made by mixing umber, lake and white.

A dove colour, or the wings of an angel, take white, a little lake, and a little ſmalt

Colours for Trees.

For the bodies of trees yellow pink, white lead, yellow oaker, and a little black.

For the leaves of them that are near the eye, take verdigreaſe and pink, or if darker, coloured, then take indigo and pink.

For leaves of trees farther off, take green verditer, pink, and white lead,

For them that are fartheſt of all, take terra verd and white.

Colours for Grounds behind a Picture.

Note, That a light hair requires a dark ground, and a dark hair a light ground.

Ground colour for a picture with a light hair is made with umber, white and black.

A ground colour for a dark hair is made with umber and white.

For Ground in a Landskip,

Take pink, oaker and white, with a little green verditer.

For country houſes at a diſtance, take white lead, yellow oaker and ſmalt; the ſame colour ſerves alſo for houſes of ſtone.

For brick houſes or walls, take yellow oaker burnt, and white lead, if the work be far off, but if near, then Indian red, and a little white.

For pails of wood or other timber work, of what kind ſoever, in country cottages, take umber, white, and a little oaker.

Sky-colours,

Are made of ſmalt and white for the higheſt ſkies, more white for the lower, and yellow mixt with a little vermillion for the loweſt of all.

The whole Art and Myſtery of colouring Maps, and other Prints in Water-Colours.

HAving, as yet, ſeen nothing publiſhed upon this ſubject that is authentick, I have thought fit, for the uſe of thoſe that are inclined to ingenuity, to ſet forth the way and manner of doing this work, it being an excellent recreation for thoſe gentry, and others, who delight in the knowledge of maps; which by being coloured, and the ſeveral diviſions diſtinguiſhed one from the other, by colours of different kinds, do give a better idea of the countries they deſcribe, than they can poſſibly do uncoloured.

Now to perform this work after the beſt manner, there muſt be provided in the firſt place a lye made with tartar and gum water.

To make the tartar lye. do thus, take two ounces of the beſt white tartar, which is a ſtonny ſubſtance that ſticks to the ſide of the wine veſſels, and is ſold by the druggiſts. Wrap it up hard and tight in half a ſheet of brown cap paper, wet it thoroughly in water, and put it into a clear fire either of wood or ſea coal; let it remain therein till it be red hot quite through then take it out with a pair of tongs, and put it immediately into a pint of water, and with your fingers rub it well to pieces; put it into a long narrow glaſs, and in a day or two the black will all ſettle, and the lye will become pure and clear; pour off the lye into a clean glaſs, and keep it cloſe ſtopt for uſe.

To make gum water, take three ounces of the whiteſt and cleareſt gum arabick, which is alſo ſold at the druggiſts, and beat it as ſmall as you can bruiſe it; then put it into a pint of fair ſpring water, and let it diſſolve therein, which will be much haſtened by ſhaking the glaſs three or four times a day very well, that the gum that is diſſolved may mix the better with the water that is above it; and when it is all diſſolved, if there appear any foulneſs in it, ſtrain it through a rag into a clear earthen diſh and put it into a glaſs, and ſtop it up for uſe. Note, That too much of this ought not to be made at a time: for if the gum be kept diſſolved too long in the water, it will rot, and ſo be of no uſe; therefore obſerve to make it freſh once in two months, or three at the farthest.

In the next place, you muſt prepare or make your colours ready for uſe, and the beſt for this work are thoſe that follow; Namely,

Copper green, and that is made thus, take a pound of right French verdigreaſe made at Montpelier, this being the beſt, for the verdigreaſe made at any other place will fade. To this add three ounces of cream of tartar, beat them both into a fine powder, and take care, while the verdigreaſe is in the pounding, to ſtop your noiſe, and hold a bunch of fine linen in your mouth to breathe through, elſe the ſubtle powder of the verdigreaſe will be apt to offend; and when this is done, mix both the powders into two quarts of water, and boil it in a earthen pipkin till it boil away a quart, then ſtrain it out when cold, and put the liquor into a glaſs, ſtop it up,

and let it ſtand to ſettle till the liquor be very clear; ſo you will have a delicate green; but ſometimes the verdigreaſe not being always of a goodneſs, the colour may not be deep enough for ſome uſes. In this caſe, put ſome of it into a broad earthen diſh, and ſet it over a chaffing diſh of coals, and by a gentle heat, diminiſh ſo much of the liquor till by trying it on a paper, and letting of it dry, the colour pleaſe you; and here you are to note, That if it ſhine too much when dry, it is not right: for it is not rightly made except it but juſt ſhine, and if you cannot make the colour deep enough by evapourating by heat, the abounding liquid, without making it ſhine too much, it were better to add ſome more verdigreaſe, and boil it up a-new till it become a tranſparent deep willow green. If you would make but a pint of this, you muſt take but half the quantities of each; and you are alſo to take notice, that this is a colour that will keep many years without decaying, if the glaſs that contains it be cloſe ſhut up.

The next colour needful to be made, is a ſtone colour, or a liquor of myrrh, which is thus done; take a pint of your tartar lye, and add to it an ounce of the beſt myrrh in powder, which you can get at the druggiſts, and boil it till the myrrh is diſſolved, which will be done in a ſmall time; let it ſettle, and pour off the clear for uſe, which you muſt keep cloſe ſtopt up; this is alſo a tincture that will never decay, and may be made fainter or deeper by boiling more of the liquor away to make it deeper, or by adding water to it to make it fainter.

And in the laſt place, there is required a crimſon colour, which is ſpeedily made, thus: Buy at the druggiſts ſome good cochineal, about half an ounce will go a great way. Take thirty or forty grains, bruiſe them in a galley pot to a fine powder, then put to them as many drops of the tartar lye as will juſt wet it, and make it give forth its colour; and immediately add to it half a ſpoonful of water, or more, if the colour be yet too deep, and you will have a delicate purple liquor or tincture. Then take a bit of allum, and with a knife ſcrape very finely a very little of it into the tincture, and this

will take away the purple colour, and make it a delicate crimſon. Strain it thro' a fine cloth into a clean gally-pot, and uſe it as ſoon as you can, for this is a colour that always looks moſt noble when ſoon made uſe of, for it will decay if it ſtands long.

Indigo is another colour uſed in colouring maps.

This is bought at the colour ſhops that ſell paint, and it muſt be ground very fine on a ſtone, as you do oil colours, with a little tartar lye to make it give its colour, and look the brighter, when 'tis ground perfect fine like a thick ſyrup, add gum-water to it till it be thin enough for your purpoſe, and keep it in a glaſs cloſe ſtopt up, but it will ſettle ſo, that when you uſe it you muſt ſtir it up from the bottom.

For a yellow, gumboge is the beſt, it is ſold at the druggiſts in lumps, and the way to make it fit for uſe is to make a little hole with a knife in a lump, and puting into the hole ſome water, ſtir it well with a pencil till your water be either of a fainter or deeper yellow, as your occaſion requires, then pour it into a galley-pot, and temper up more, till you have enough for your purpoſe.

Red lead is alſo a colour much uſed in this work, and ſo is orpinent; both which you may buy at the colour ſhops finely ground ſo that they need only to be tempered with gum water to be fit for uſe.

Blue bice is alſo uſed often, which needs only to be tempered with gum water, and when men deſign to be curious, they may uſe inſtead thereof ultramarine, which is the beſt and moſt glorious of all blues, but vaſtly dear; yet ſmall parcels of it about two ſhillings price may be bought at ſome colour ſhops, which if carefully uſed, will go a great way; it needs only to be tempered in a very ſmall galley-pot, with ſome gum water, till it lie on the paper a good colour.

There is likewiſe an exceeding glorious red or crimſon colour, named carmine, which is exceeding dear, yet about half a crown's worth will go a great way in the uſes to which it is put; it is tempered with gum water and gives ſeveral degrees of colour according as it is thicker on thinner tempered.

Vermilion is alſo uſed in ſome caſes. This is a glo-

rious ſcarlet, and needs only to be tempered with gum water; for it may be bought very finely ground to powder at the colour ſhops; only it is to be noted, that this colour ſhews much brighter when dry, if glazed over with ſome thick gum water, which is made by putting two ounces of gum arabick to half a pint of water, or leſs.

And for ſome purpoſes burnt umber, ground very fine with water as thick as poſſible, and then tempered up with gum water to a due thickneſs, makes a good tranſparent colour.

There is another colour needful in this work, which is a moſt pleaſant graſs green, and that is made thus, take a lump of gumboge, and make a holl in it, then put therein ſome copper green, ſtir it about with a pencil, and from a willow you will ſee it turn to a graſs green, which you may make deeper or lighter as you ſtir it about a longer or leſſer time.

Of the Practice of Colouring Maps.

THE colours being prepared as is before directed, the only way to colour maps well, is by a pattern done by ſome workman, of which the Dutch are eſteemed the beſt; three or four ſuch maps coloured by a good artiſt, are ſufficient to guide a man in the right doing of this work; but if he cannot obtain this, he may by a few trials grow a good artiſt in a ſhort time; for this is only attained to by practice, and if a man ſpoil half a ſcore maps in order to get the knack of colouring a map well at laſt, there's no man that is ingenious will grumble at it.

The art of colouring right may be obtained by practice, as was ſaid, but the hardeſt thing is to know rightly how to make and prepare the colours properly, without ſuffering them to ſink into it: all that are here mentioned will lie fair and pleaſant to the eye, and it is the fairneſs of the colour is moſt eſteemed in this art of map-

painting; but if the paper be not good and ſtrong, no art can make the colours lie well; therefore in buying maps chuſe thoſe that are printed on the thickeſt or ſtrongeſt paper.

DIRECTIONS how to lay on METZOTINTO PRINTS on GLASS.

IN undertaking this, curiouſly lay the prints flatways in warm water, of the thinneſt and fineſt paper, for that which is rough and thick will not do near ſo well, if at all; let them ſoak well, and your glaſs being very white and thin, go over it with Venice turpentine ſpread thin with a pliable knife, and daub it over with your finger, that the turpentine may ſeem rough.

This done, take the ſoaked print, and lay it on a clean cloath ſmooth, then preſs with another to take out the water, then lay it on the glaſs, the print next it, beginning at one end ſtroaking outwards the places already fixed on the glaſs, that neither wind nor water may be retained between to wrinkle it; then with a bit of a ſponge, or your hand, wet the backſide, and lightly by degrees roll off the paper carefully, without making holes, eſpecially in the lights, which are the tendereſt, and when the print appears very plain on the backſide, let it dry about two hours, then varniſh it over with turpentine or maſtick varniſh till you can ſee through it, and a night's drying will prepare it to be worked on with colours.

If you would have all the paper off, ſo that nothing but the print may remain, lay it as before with oil of maſtick, and a little turpentine, and a bruſh will fetch off the paper.

THE

Exports and Imports of G. Britain to and from foreign Nations.

To and from CHINA, INDIA and PERSIA.

EXPORTS GReat quantites of bullion, lead, all ſorts of Engliſh cloth, eſpecially broad cloth, ſtuffs, callimancoes, long ells, and ſome other goods, which are the product or manufacture of this kingdom.

IMPORTS. China ware, tea of all ſorts, cabinets, raw and wrought ſilk, muſlins, callicoes, cotton cloths, coffee, canes, diamonds, drugs of many kinds, grocery wares of various ſorts, and many other ſorts of goods. Of which Mr. Gee ſuppoſes as much re exported to foreign nations, as repays all the bullion carried to theſe places, and a conſiderable balance beſides.

To and from AFRICA.

EXPORTS. Linnen and woollen manufactures, knives, ſciſſars, ſmall looking glaſſes, ſtrong waters, pewter diſhes, beads, and other toys.

IMPORTS. Gold duſt, red wood, elephant's teeth, Guiney grain, gum, oſtrich feathers, amber, ebony, cryſtal, and great numbers of negroes carried to the plantations of America. From the coaſt of Barbary we have rice, figs, almonds, raiſins, dates and copper. The great advantage of the Africa trade is, that it carries no money out, ſupplies our plantations with negroes, and brings in a great deal of bullion for negroes ſold in the Spaniſh Weſt Indies.

To and from the CANARY ISLANDS.

EXPORTS. Bays, kerſeys, ſerges, Norwich ſtuffs, and other common manufactures, ſtockings, hats, fuſtians, haberdaſhery wares, tin, hardware, alſo herrings, pilchards, ſalted fiſh, grain, linnen, pipe-ſtaves, hoops, and ſome other commodities.

IMPORTS. Canary wine, logwood, hides, indigo, cochineal, and ſome few commodities which are the prodect of the Weſt Indies.

To and from TURKEY.

EXPORTS. Broad cloths, long ells, tin, lead, ſome iron, ſome French and Lisbon ſugars, and ſome bullion.

IMPORTS. Raw ſilk, grogram, yarn, dying ſtuffs, drugs, ſope, leather, cotton oil, ſome fruit, as currans, raiſins, vitriol, ſulphur, opium, galls, balm, box-wood, mohair. The balance of this trade is thought to be in our favour.

To and from ITALY.

EXPORTS. Broad cloth, long ells, bays, druggets, callimancoes, camblets, and other ſtuffs, leather, tin, lead, fiſh, as pilchards, herrings, ſalmon, Newfoundland cod, ling, logwood, &c.

IMPORTS. Raw, thrown and wrought ſilks, wine, oil, ſope, olives, ſome dyer's wares, anchovies, brimſtone, carpets, ſcented gloves, necklaces, and ſome other things. The balance of this trade is thought to be conſiderably againſt us.

To and from SPAIN.

EXPORTS. Broad cloth, druggets, callimancoes, bays, ſtuffs of divers kinds, leather, fiſh, tin, lead, linnen, corn, &c.

IMPORTS. Wine, oil, fruit of divers kinds, wool, indigo, cochineal, and dying ſtuffs, tent, &c. The balance is ſuppoſed but very ſmall in our favour.

To and from PORTUGAL.

EXPORTS. Broad cloth, druggets, bays, long ells, callimancoes, perpets, ſays, kerſeys, flannels, and all ſorts

of ſtuffs, alſo tin, lead, leather, fiſh, corn, and other things.

IMPORTS. Wine, oil, ſalt and fruits, as oranges, lemons, almonds, alſo figs, ſaffron, ſope, white marble, liquoriſh, ſhumack. There is a conſiderable balance in our favour.

To and from FRANCE.

EXPORTS. Tobacco, horn plates, tin, ſome lead, ſome flannels, corn in time of ſcarcity, wool, coals and allum.

IMPORTS. Wine, brandy, linnen, fine lace, fine cambricks, cambrick lawns, brocades, velvets, ſalt, paper, prunes, cheſnuts, &c. There is here a balance againſt us of no leſs that 500,000*l.* per annum.

To and from FLANDERS.

EXPORTS. Serges, a few flannels, a very few ſtuffs, ſugars, tobacco, tin and lead.

IMPORTS. Fine lace, fine cambrick and cambrick lawns, whited linnens, threads, tapes, incles, and divers other commodities, to a very great value. The balance is very much againſt us, being at leaſt 250,000*l.* per annum.

To and from HOLLAND.

EXPORTS. Broad cloth, druggets, long ells, ſtuffs of a great many ſorts, leather, corn, coals, tobacco, rice, ginger, pitch, tar, with Eaſt India and Turkey goods.

IMPORTS. Great quantities of fine hollands, thread, tapes, incles, whale fins, braſs battery, madder, lint-ſeed, flax, argol, wainſcot, clapboard, paper, &c. The balance is conſiderably for us.

To and from GERMANY.

EXPORTS. Broad cloth, druggets, long ells, ſtuffs, ſerges, tobacco, ſugar, ginger, tin, lead, Eaſt India goods, and ſeveral other commodities.

IMPORTS. Prodigious quantities of linnen, linnen yarn, kidſkins, tin plates, and a great many other commodities. The balance it very near as much againſt us in this trade, as in that of France.]

To and from DENMARK, SWEDEN, and NORWAY.

EXPORTS. Guineas, crown pieces, bullion, ſome tobacco, a few coarſe woollens, meal, malt, beef, tallow, ſalt, coal, ſome linnen, lead, butter and herrings.

IMPORTS. Deal boards, fir timber, ſpars, planks, iron and copper, wire of iron and copper, tar, wainſcot, pipe ſtaves, great guns, mortars, bullets. We pay them a very great balance, amounting to near 390,000l. per annum.

To and from RUSSIA.

EXPORTS. Some coarſe cloath, long ells, worſted ſtuffs, tin, lead, tobacco, and a few other commodities.

IMPORTS. Hemp, flax, linnen cloath, linnen yarn, Ruſſia leather, iron, furs, pot aſhes, timber, train oil, tallow, &c. to an immenſe value. The balance is againſt us here 400,000l. per ann.

To and from NEW ENGLAND.

EXPORTS. All ſorts of woollen manufactures, linnen, ſail cloath, and cordage for rigging their ſhips, haberdaſhery, hard ware, &c.

IMPORTS. Pitch, tar, and turpentine, with ſome skins, pipe ſtaves, maſts, pine, cedar, &c.

To and from NEW-JERSEY, NEW-YORK and PENSILVANIA.

EXPORTS. Broad cloath, kerſeys, druggets, ſerges, and manufactures of all kinds.

IMPORTS. Gold and ſilver, with ſome ſmall quantity of wheat, flax, and hemp.

To and from VIRGINIA and MARYLAND.

EXPORTS. All manner of cloathing and houſhold goods, iron manufactures of all ſorts, ſaddles, bridles, braſs and copper wares, and in ſhort a part of all our manufactures.

IMPORTS. Tobacco, both for home conſumption and re-exportation, tar, pitch, turpentine, and ſome lumber.

To and from CAROLINA.

EXPORTS. The ſame commodities as to Virginia, viz. cloaths and all ſorts of manufactures.

IMPORTS. Rice, deer skins, buck skins, beaver, and ſome ſmall quantity of raw ſilk and tobacco.

To and from the SUGAR PLANTATIONS.

EXPORTS. Cloathing of all kinds, both linnen, ſilk and woolen, wrought iron, braſs, copper, all ſort of houſhold furniture, and a great part of their food.

IMPORTS. Sugar, ginger, rum, moloſſes, cotton, indigo, cocoa nuts, pymento, tamarinds, lime juice, ſome gold and bullion from Jamaica to the value of 539,500*l.* per ann. from Barbadoes, to the value of 146,600*l.* from the Leeward iſlands, viz. Antigua, St. Chriſtopher's, Nevis, Montferrat, Berbuda, Anguilla, Spaniſh Town, Tortolo, and the reſt of the Virgin iſlands, to the value of 642,270*l.*

To and from IRELAND.

EXPORTS. Beaver skins, and beaver wool, French indigo; beer, ale, and cyder; old and new drapery; ſalt, pitch, and tar; books, bark, bottles; ſilk, raw, thrown, and manufactured; cambrics, hollands, lawns, muſlins; cotton, ſilk, and threed ſtockings; worſted and ſilk ditto, and breeches; callicoes; ſilk, and hair ſhags; ſilk ribbons, cottons, mohair buttons, fuſtians, cheques, tapes, kentings; gold and ſilver, threed and lace; bone lace, linſey-woolſeys, camblets, millenary wares; cheeſe, hoops, hops chalk and whiting; dye ſtuffs, drugs, wrought plate, china ware, earthen ware, hard ware, tin-plates, block-tin, ſugar, ſugar-molds teas, groceries, fruits and ſpices; Turkey coffee, liquorice, logwood, cochineal, ſeeds, ſcythe-ſtones, tobacco, malt, wheat and flour; hats, barley, looking glaſs plates, drinking and other glaſſes: iron, ſteel, ſheet lead; white, red and black ditto; flax and flax ſeed; iron, and ſheet ditto; mahogony, hogs brittles, colours, battery and braſs ſhruff; goats hair, Spaniſh and Engliſh wool, bees wax, copper plates, Piſtachio nuts, almonds, rice, Turkey figs; wool cards, ſpaw water, bricks, rhe-

nish wines; salt petre mustard, red wood, cotton wool, buck and does skins; pins, needles, ermins, Turkey cotton, elephants teeth, pewter, flints, toys hats, ivory and horn combs; hollow sword blades, coals, slates, snuff.

IMPORTS. Linneos and linnen yarn; wool, woollen and worsted yarn; copper ore, beef, butter, pork, tallow; oats and oatmeal (to North Britain) rabbits fur and skins; hides, kid, calf, goat, lamb, otter and fox skins; pelts, ox horns, glew, uniquebagh, feathers, quills, candles, sope, and some other inconsiderable articles.

AN

Alphabetical List of English Manufactures, with the best Makets for the purchase of them.

BAys, double, single and minikin, are made a Colchester, Bocking Braintree, Witham, Cogeshall, and some other towns in Essex, and at Manchester.

Blankets. In Oxfordshire and Wales.

Brass and copper, cast, viz. into statues, into battery, as pots, sauce pots, kettles, &c. and afterwards hammered; black latten, for clock work, jacks, &c. Foundery ware, as cannon, mortars, apothecaries mortars, bells, pipes, wheel and mill work, buttons, coach and upholsterer's nails: wrought and hammered, clock-work, jack-work and mill work. kitchen ware, clocks, and dials, monuments, plate brass, and toys: in and about London.

Broad cloath, mixed or medley cloaths in Wiltshire, Somersetshire, Kent, Surrey, and Devonshire. Plain white cloaths for dying, at Salisbury, Worcester, Cirencester, and all parts of Gloucestershire.

Caps, high crowned, for seamen, called Monmouth caps, at Bewdly in Worcestershire.

China, at Bow in Middleſex, and at Worceſter.

Coarſe woollens, as rugs, chair coverings, penniſtons, half thicks, duffles, &c. in Cumberland, Weſtmoreland, and Lancaſhire.

Cottons, in Weſtmoreland, and Lancaſhire.

Dozens, or narrow woollen cloath mixed, at Leeds, Wakefield, Bradford and Huthersfield in the Weſt riding of Yorkſhire.

Druggets, in Wilts, Somerſetſhire and Berkſhire.

Duroys, in the ſame places.

Flannels, Salisbury, Shrewsbury, and Wrexham in Wales.

Frizes, at Worceſter, and parts adjacent.

Glaſs, fine flint, including all ſorts of drinking glaſſes, cruets, phials, retorts, caſe bottles, decanters, ſconces, branches, toys, watch glaſſes, tubes and optic glaſſes, at London, Briſtol, Stourbridge, Nottingham, Sheffield, and Newcaſtle.

——Looking glaſſes, coach glaſſes and ſaſhes, at London.

- - Crown glaſs for windows, ordinary ſaſhes, pictures, and ordinary quarrel glaſs, at London, Briſtol, Stourbridge and Newcaſtle.

Green glaſs, for bottles, phials, retorts and melons, at London, Briſtol, Leith, Glouceſter, Stourbridge, and Newcaſtle.

Hats, felts at Leiceſter, and Warwick. Caſtors in Derby. Bevers in London.

Iron, caſt into guns, ſhells, cylinders, cannon, ſmall arms, bombs, hand granadoes, chimney backs, pots, waterpipes, furnaces, plates and bars, and retorts, at Coalbrookdale, Shropſhire, and at Crowley's iron manufactories in Greenwich and Newcaſtle.

- - -Forged edge tools, knives, and ſciſſars, cutlery ware and toys, nails, hinges, hooks, ſpikes, cocks, keys, razors, ſurgeon's inſtruments, and clothiers and other ſheers, at London, Birmingham, and Sheffield.

- - -Hammered, chains, anchors, crows, tires, baluſtres, rails, eſpaliers, paliſadoes, gratings, bar iron, and ſcrews, at London and Newcaſtle.

- -Milled hoops and all ſplit and flatted iron, ſprings for clocks and watches, London.

Kerſeys, or coarſe cloaths, Bradford, Hallifax, Rochdale, Guildford, and the circumjacent country.

- - Devonſhire kerſeys, in Devon and Somerſetſhire.

Lead, Pigs and ſows for exportation: ſheet lead, milled or-caſt for covering, buildings, ſheathing ſhips, coffins, baſons or fountains.

- - -Caſt lead, for ſtatues and pipes, bullets, ſmall ſhot, moulds, letharge, calcined lead, &c. at London and Newcaſtle.

Linſey woolſey, for hangings, Kidderminſter and Worceſter.

Long ells, or perpets, at Tiverton, Sudbury and Colcheſter.

Mancheſter ware at Mancheſter.

Narrow woolens. See dozens.

Perpets. See long ells

Plaidings at Coventry and in Scotland.

Sackings, at Wantage and Newberry, Berks.

Says at Sudbury.

Serges, in Wilts, Somerſetſhire and Berkſhire.

Shalloons, Northamptonſhire, Weſt Riding of Yorkſhire, Berkſhire, Somerſetſhire, Wiltſhire, Hampſhire. Carliſle, Edingburgh, Stirling and Muſſelburgh.

Silks of various ſorts, in Spittlefields.

Stockings, woven, Nottinghamſhire, Leiceſterſhire, Derbyſhire, Warwickſhire and Spittlefields.

- - Knit yarn, in Glouceſterſhire, Yorkſhire, Worceſterſhire, Derbyſhire, Northampton, Kendal and Aberdeen.

Stuffs, Norwich, Spittlefields, Briſtol and Darlington.

Tammies, or Coventry ware at Coventry.

Tapeſtry, at Fulham in Middleſex

Tin, blocks for exporting, pewter molds and ſolder, London.

Velvets, in Spittlefields, and a ſort at Mancheſter.

Perhaps it may not be amiſs to add, that butter in firkins is the produce of Suffolk, Yorkſhire, Durham, Cumberland and Northumberland; cheeſe of Cheſhire, Wilt-

ſhire, Warwickſhire, Glouceſterſhire and Suffolk; red herrings come from Yarmouth; coals from Northumberland, Durham and Briſtol; malt from Herefordſhire, Eſſex, Bucks, Kent, Oxford and Berks; ſalmon from Berwick.

A TABLE, ſhewing the Value of Portugal Pieces, in Pounds, Shillings, and Pence Sterling.

PORTUGAL PIECES.

Numb. of Pieces.	at 3 12 0 l. s. d	at 1 16 0 l. s. d	at 0 18 0 l. s. d	at 1 7 0 l. s. d
1	3 12 0	1 16 0	0 18 0	1 7 0
2	7 4 0	3 12 0	1 16 0	2 14 0
3	10 16 0	5 8 0	2 14 0	4 1 0
4	14 8 0	7 4 0	3 12 0	5 8 0
5	18 0 0	9 0 0	4 10 0	6 15 0
6	21 12 0	10 12 0	5 8 0	8 2 0
7	25 4 0	12 16 0	6 6 0	9 9 0
8	28 16 0	14 8 0	7 4 0	10 16 0
9	32 8 0	16 4 0	8 2 0	12 3 0
10	36 0 0	18 0 0	9 0 0	13 10 0
20	72 0 0	36 0 0	18 0 0	27 0 0
30	108 0 0	54 0 0	27 0 0	40 10 0
40	144 0 0	72 0 0	36 0 0	54 0 0
50	180 0 0	90 0 0	45 0 0	67 10 0
60	216 0 0	108 0 0	54 0 0	81 0 0
70	252 0 0	126 0 0	63 0 0	94 10 0
80	288 0 0	144 0 0	72 0 0	108 0 0
90	324 0 0	162 0 0	81 0 0	121 0 0
100	360 0 0	180 0 0	90 0 0	135 0 0

Note, The bank of England nor ſtamp office take no peices of gold that want above 6 grains in weight.

A TABLE, shewing the Value of Pistoles and Louis d'Ors, in pounds, shill. and pence.

Louis d'Ors, at 1 4 *l.* *s.*	Pistoles at 0 16 6 *l.* *s.* *d.*
1 4	0 16 06
2 8	1 13 00
3 12	2 09 06
4 16	3 06 00
6 0	4 02 06
7 4	4 19 00
8 8	5 15 06
9 12	6 12 00
10 16	7 8 06
12 0	8 5 00
24 00	16 10 00
36 00	24 15 00
48 00	3 00 0-
60 00	4 05 00
72 00	49 10 00
84 00	7 15 00
96 00	66 00 00
108 00	74 05 00
120 00	82 10 00

A TABLE, shewing what each of the following Pieces should weigh; likewise the Value of Gold and Silver per ounce, penny wt. &c.

Coins.	Value *l.* *s.* *d.*	Weight at 3*l* 18. per oz. pwt. gr.
A Portugal Piece	3 12 0	18 1 $\frac{3}{10}$
Half ditto —	1 16 0	9 5 $\frac{1}{2}$
Quarter ditto —	0 18 0	4 14 $\frac{3}{4}$
Eighth ditto —	0 9 0	2 7 $\frac{3}{8}$
Sixteenth ditto	0 4 6	1 3 $\frac{15}{20}$
A Moidore —	1 7 0	6 2 $\frac{9}{10}$
Half ditto —	0 13 6	3 11
Quarter ditto —	0 6 9	1 17 $\frac{1}{2}$
A Guinea —	1 1 0	5 $\frac{9}{10}$
Half ditto —	0 10 6	2 16
Louis d'Ors —	1 4 0	5 6
Half ditto —	0 12 0	3 3

Value of Gold.

	l.	*s.*	*d.*
1 Pound is worth	48	0	0
1 Ounce	4	0	0
1 Penny weight	0	4	0
1 Grain	0	0	2

Value of Silver.

1 Pound is worth	3	0	0
1 Ounce	0	5	0
1 Penny weight	0	0	3
1 Grain	0	0	1

A TABLE of the two great roads from EDINBURGH to LONDON.

St age	Miles	Tp	Stages	Miles	
Haddington	16	16	2	Lintown	16	16
Dunbar	13	29	2	Beild	16	32
Old Cambus	12	41	2	Moffat	17	49
Berwick	16	57	2	Lockerby	15	64
Belford	16	73	2	Allifon Bank	14	78
Alnwick	14	87	2	Carlifle	12	90
Morpeth	19	106	2	Penrith	19	109
Newcaſtle	14	120	1	Kendal	15	134
Durham	15	135	2	Burton	12	146
Darlington	18	153	2	Lancaſter	11	157
North-Allerton	16	169	3	Garſtang	9	166
Burrough Bridge*	19	188	2	Preſton	14	180
Weatherby	12	200	1	Wigton	16	196
Ferry Bridge	16	216	1	Newton	8	204
Doncaſter	15	231	2	Leſtock	16	220
Bawtry	18	239	0	Newcaſtle under L	21	241
Tuxford	16	255	0	Stone	8	249
Newark	13	268	1	Litchfield	27	276
Grantham	14	282	2	Coles Hill	11	287
Stamford	10	302	2	Coventry	13	300
Stilton	24	316	2	Dunchurch	9	309
Bugdon	14	330	1	Towceſter	19	328
Biggleſwade	16	346	3	Stoney Stratford	10	338
Stevenage	14	360	2	Dunſtable	19	357
Hatfield	12	372	1	St. Albans	13	370
Barnet	9	381	1	Barnet	9	379
LONDON	11	392	3	LONDON	11	390

*York is 17 miles off this place, and 9 miles about from the direct road.

N. B. Tp ſtands for turnpike, and the figure below what is paid at each.

Curious FIRE-WORKS.

How to make artificial fire-works of all ſorts for pleaſure, &c.

OF artificial fire works for recreation, there are three eneral ſorts, *viz* Thoſe that aſcend or mount in the air: Thoſe that conſume on the earth: And ſuch as burn on the water And theſe are again divided into three particulars. *viz* For the air the ſky rocket, the flying ſauciſſon and balloon: For the earth the ground-rocket, the fiery lances, and the ſauciſſon deſcendent. For the water-globes or balls, double rockets and ſingle-rockets; and of theſe in their particular orders, to make them, and ſuch other matters, as may occur relating to fire works

But before I enter particularly on them, it will not be amiſs to give the unlearned inſtructions for making his moulds for rockets, &c.

This mould muſt be of a ſubſtantial piece of wood well ſeaſoned, and not ſubject to ſplit or warp; and firſt the callibre or bore of it, being an inch in diameter, the mould muſt be ſix inches long, and breech an inch and half; the broach that enters into the choaking part, three inches and a half long, and in thickneſs a quarter of an inch. The rowler on which you wrap the paper or paſte board being three quarters of an inch diameter, and the rammer ſome what leſs, that it may eaſily paſs and repaſs, made hollow to receive the broach; for the cartouſh coffin muſt be filled with the materials, the broach being in

If the bore be two inches diameter, the rocket muſt be twelve inches in length if an inch and a half in bore then nine inches long, and ſo proportionably to any other diameter. The cartouſh or caſe, muſt be either ſtrong

paper or fine paſte-board, choaked within an inch and quarter of the top, rowled on the rowler with a thin paſte to keep the doublings the nigher together, that it may have the greater force and higher flight. Having thus far conſidered your mould and cartouſh or caſe, I proceed to the compoſition and filling part. &c.

A Sky Rocket, how to make it, &c.

In the compoſition of your filling materials be very cautious that you exceed not the juſt proportion, for which I ſhall give directions to be a ſtandard in this caſe, *viz.* Having beat a pound of powder very fine, and ſifted it through a lawn ſieve, that no whole corns remain in it; do the like by two ounces of charcoal; then ſift them together, ſo that they mix well, which done, fill a ſmall rocket with this mixture, and if it break in mounting, before it come to the ſuppoſed height, or burns out too fierce, then is there too much powder, and more fine ſifted charcoal muſt be added; but if there be too much charcoal in the compoſition, then upon trial it will not aſcend, or but very little.

Obſerve in charging your rocket, at every quarter of an ounce of ingredients, or thereabouts, you ram it down very hard, forcing your rammer with a wooden mallet, or ſome weighty piece of wood, but no iron or ſtone, for fear any ſparkles of fire fly out and take your combuſtible matter; ſo fill it by degrees. If you deſign either to place ſtars, quills, or ſmall rockets on its head; you may put in about an inch and a half of dry powder for the bounce; but if you are to place the forementioned things on the head of a great rocket, you muſt cloſe down the paper or paſte board very hard, and prick two or three holes with a bodkin, that it may give fire to them when it expires, placing a large cartouſh of paſte-board on the head of the rocket, into which you muſt put the ſtars or ſmall rockets, paper ſerpents or quill-ſerpents; of which I ſhall ſpeak more hereafter.

Note further, That if you would have your rocket ſparkle much, you muſt put ſome groſly bruiſed ſalt petre into the compoſition; but then it muſt not lie long before it be let off, for fear it give a damp to the powder. If you would have it leave a blue ſtream as it aſcends, put fine beaten and ſifted ſulphur into it, but of neither

of theſe more than a third part of charcoal; and in this manner greater and leſſer rockets are made, but the leſſer muſt have more powder and leſs charcoal than the greater, by a fifth part in ſix.

Golden rain, and golden hair.

For golden rain, or ſtreams of fire, that will, when at height, deſcend in the air like rain; take large gooſe-quills, take only the hollow quill as long as may be, fil it with beaten powder and charcoal, as for the air rocket only add a little powder of ſulphur. Being hard filled to a quarter of an inch, ſtop that with wet powder, called wild fire; place as many as you think convenient on the head of a great rocket, paſted on in a rowl of paper, ſo that it may not fall off 'till the rocket burſts, there being a little dry powder in it to force the end when the ſtream of fire ceaſes, at which time they taking, will appear like a ſhower of fire of a golden colour, ſpreading themſelves in the air, and then tending directly downward. This is to be conſidered when you ſtand directly, or ſomething near under them; but if you are at ſome diſtance, then they will appear to you like the blazing tail of a comet, or golden hair.

Silver ſtars, how to make them.

To make ſtars that will expand in flame, and appear like natural ſtars in the firmament for a time; take half a pound of ſalt petre, the like quantity of brimſtone, finely beaten together ſifted and mingled with a quarter of a pound of gun powder ſo ordered: then wrap up the compoſition in linnen rags or fine paper, to the quantity of a walunt, bind them with ſmall thread, and prick holes in the rag or paper with a bodkin, and place ſix or ten of them on the head of a great rocket, as you did the quills, and when the rocket expires, they take fire and ſpread into a flame, hovering in the air like ſtars and deſcend leiſurely 'till the matter is ſpent that gives them light.

Red firey coloured ſtars, how to make them.

Take in this caſe half a pound of powder, and double the quantity of ſalt petre; as much fine flour of brimſtone as powder, wet them with fair water and oil of petroleum, till they will ſtick together like pellets; then make them up ſomewhat leſs than the former, and rowl

them in ſifted dry powder, then let them harden, by drying in the ſun, or air, and place them on a great rocket, as you did the other ſtars, and you will perceive them when the rocket is at the height, fall like bodies or globes of fire, in the manner as if real ſtars were ſhooting or falling from the sky; for by reaſon of their wetneſs or denſity, they cannot expand into flame, which occaſions them by the preſſure of their weight to deſcend with greater impetuoſity, till they waſte and vaniſh into air, &c.

Another ſort of ſtars, that give great reports in the air, as if armies were fighting.

Here you muſt obſerve to place ſix, ſeven, or eight ſmall rockets on the head of a great one, filled only with dry powder, but indifferently rammed, and on the ends of them holes, being pricked through, place any of the ſorts of ſtars, or a mixture, as your fancy leads you; and when the ſmall rockets go off like thunder in the air, the ſtars will take fire, ſo that the noiſe will ſeem to the ſpectators as if it proceeded from them, becauſe they will be ſeen on fire before the ſound of the reports can be heard.

To make paſte board mortars for balloons.

Theſe ſtately proſpects of fire are to be carried into the air by the force of powder, by the help of mortars; and therefore the making of the mortars are in the firſt place to be conſidered.

Take a rowler of wood, about 12 inches diameter, and three foot and a half in length, wet ſtrong paſteboard, and rowl it upon it as cloſe as may be, glewing the paſte board between each rowling; then being about five inches thick, bind over it ſtrong pitched rope, though indifferent ſmall: then choak the breech of it, which muſt be beyond the length of the powder, with a ſtrong cord, pitch or glue it over, that the powder may not force its vent that way, and ſo when the mortar is well dried, draw out the rowler, and make it as even as can be; bore a touch hole two inches from the breech, that it may enter into the hollow of the mortar, and ſet it by for uſe.

To make balloons, the rartiy of fire works.

Take ſtrong paper or paſte-board, rowl it on a 12 inch rowler, near as thick as it is long; then with a ſtrong ſmall cord, choke it at one end only, leaving a port fire, which is a place to put in a quill of wild fire, that will laſt till (being ſhot out of the mortar) it comes to its height; then next to that put on an ounce and a half of looſe powder, and place in it as many ſmall rockets and ſtars as it will hold; ſo choak up the other end quite. You may alſo put into it little quills of wild fire, then being cloſed up only a port fire remaining, which is made of a quill of wild fire, as is ſaid, or ſtouple, to make which, in the cloſe of this head, I ſhall inſtruct you, charge the mortar, being ſet ſloping upwards, with half a pound of corn powder, and it will by giving fire at the priming-holes, ſend the balloon up into the air a prodigious height, and when it comes to the dry powder, that will break the balloon; and then the ſtars and rockets in it taking fire, will ſcatter abroad in various curious figures, delightful to the ſpectators; and as they are cunningly placed, they will repreſent crowns, cyphers, characters, dates of the year, &c.

The airy or flying ſauciſſon, how to make it.

This curious fire-work muſt be made in the compoſition matter for filling moſtly of corned powder, putting before it when you fill the cartouſh or caſe as much fine ſifted powder and charcoal as compoſed for the rocket, as will carry it to its height, leave a hole for the port-fire in the chocking as big as a gooſe quill will enter, filling it with duſt powder and charcoal, and ſo cloſe up the open end, by turning in the paper or paſte board corner-wiſe either glewing or waxing it down.

Paſte board guns to caſt the ſauciſſons into the air, how to make them.

To make theſe kind of guns, take a rowler, ſomewhat leſs than for the balloon, rowl it on your paſte-board

and cord it over with ſtrong pack-thread, making their touch holes at the bottom, becauſe they muſt be placed upright on a plank or board in a row fixed into the plank or board in holes cut proportionable to them, and laſhed faſt to ſtaples above and beneath with ſtrong cords, and being charged with a quarter of a pound of powder, fire by match or otherwiſe given to the touch hole underneath the plank, when the ſauciſſon is lightly put in with the neck or port fire downward, ſo that it may touch the powder; and this will ſerve for uſe a conſiderable time.

Sauciſſons for the earth or water, how to make them.

Make your cartouſhes or caſes about nine inches long, and an inch in the diameter of the callibre: by rowling paper or thin paſte board on a wooden rowler; choak the ends only, leaving at one end a paſſage to thruſt in gooſe quills filled with duſt powder and charcoal well mixed, at a port fire, glue them over, or uſe ſmall cord glued or pitched to ſtrengthen the caſe that it burſt not unſeaſonably by the force of the compoſition, with which you muſt fill them when you have choaked; only at the port fire end, the compoſition being about 2 inches, the ſame as the former, the reſt corned powder, having primed and fixed them on a plank in a row, about a foot diſtance, lay a train of ſtouple, and they will fire gradually, flying about on the earth, or the water, according as you place them, giving reports like a volley of muſkets.

This ſtouple, is uſeful for train, and port fire is no more than cotton wool well dreſſed in water and gunpowder dried in the ſun, or in a clean ſwept warm oven that it may come ſomewhat near tinder, but more ſwift and fiercer in its fire when it has taken.

Fire boxes, how to make them.

Take a great cartouſh or caſe made, as for the balloon, croud it full of ſmall rockets or ſerpents, with the choaked part downward, prime them with ſtouple or wild fire; fix it firm on a pole, make a priming hole in the ſide towards the lower end, and run in a quill of fine beaten powder, and they will fly out (the upper end being leſt open) one by one as ſwift as may be; or if you ſcatter looſe powder, they will fly out ſeveral together,

with prodigious noiſe, and breaking, imitating a peal of thunder.

Fire Lances, how to make them.

Theſe are uſually for running on the water, making there a very pleaſant paſtime; their cartouſh or caſes are made like the ſmall rocket, with thin paſte board glued and row'ed up on a wooden roller, about nine inches long: if you would have it carry a long firy tail on the water, the compoſition muſt be 2 ounces of charcoal, half a pound of ſalt petre, or proportionable for ſo many as you make, bruiſed finely, and ſifted; but if you would have it burn bright like a torch, put only four ounces of powder to the forenamed quantity of brimſtone and ſalt petre, without any charcoal duſt, tying to each line a rod in the ſame nature as to the fky rocket; but not of that largeneſs; and they will float about a long time, making a ſtrange ſhew in a dark night, their ends being ſo placed on a frame when you give fire, that they may leap out of themſelves, one, two, or three at a time, or as you deſign them, by putting more or leſs ſtouple for port fires; ſcatter a very ſmall quantity of looſe powder underneath.

To make the appearence of trees and fountains of fire.

This is done by placing many little rockets on the head of a great one, by paſſing their ſlender rods through its largeſt cartouſh; and if they take fire whilſt the rocket is vigorouſly aſcending, they will ſpring up like branches or fire trees; but if they go off juſt as the rocket is ſpent, and deſcending, they will appear like a fountain of fire.

Girondels or fire-wheels, how to make them.

Take a wheel of light wood, like the circle of a ſpinning wheel, on which the band is placed; tie ſmall rockets round it in the nature of a band; ſo faſt, that they cannot fly off; and ſo head to tail, that the firſt fired, when it burſts may give fire to the next, whoſe force will carry the wheel (which muſt be placed on a ſtrong pin in the axletree) round ſo faſt, that although but one rocket go off at a time, it will ſeem all on fire, and ſo continue whilſt all are gradually ſpent; and this eſpeci-

ally at the angles of great fireworks are very ornamental

Ground rockets, and the beſt way of making ſerpents.

The mould of the ground rocket may be made in all particulars like that of the sky-rocket, but leſs in length and circumference, ſix, ſeven or eight inches being a warrantable length; rowl on the cartouſh or caſe to a moderate thickneſs; choak it at one end, fill it, the broach being as in the sky rocket, with this compoſition.

Put but an ounce of charcoal to a pound of powder, and about half an ounce of ſalt petre, beat, mingle and ſift them finely: put in about a quarter of an ounce between every ramming, till it is full within an inch with corned powder, lightly ramming it, leaving only ſo much room as may choak it at that end, cutting them off that hangs over, and leaving it with a pricked end: being thus finiſhed, prime it with a little wet powder, and lay it a drying 'till you diſpoſe of it for your paſtime.

The ſerpent is a kind of ſmall rocket; to make them therefore well, make a caſe of ſtrong white paper, about ſix inches and a half, the rowler being about the thickneſs of a ſmall arrow. it muſt have a head and a broach proportionable, being rowled up hard, paſte the edge that turns over; choak it with a ſtrong packthread, and fill it with a compoſition of ſix ounces of powder to one of charcoal, both beaten finely, ſifted and well mingled; put in but little and little at a time, and every time you put any in, ram it down hard 'till within an inch full, then put in corned powder, preſs it down gently, and with the end of you rammer force down the end that ſtands a little above; ſo that it may cover the powder, and then ſeal it down with wax; prime with duſt powder, and a little flower of brimſtone, and with your match, having a good coal on it, give fire as you ſee occaſion.

Firey globes or comets, how to make them.

Take half a pound of powder, two ounces of brimſtone, an ounce of ſalt petre, bruiſe theſe groſly, and wet them with aquavitae and oil of petroleum, that they may be made into balls, as big as ordinary waſh balls:

then dry them very hard, and wrap them up in cere-cloths made of brimſtone, roſin and turpentine, in which make a little hole, and prime with wild fire: put the ball then into a ſling, and the wild fire touched, throw it up as high as you can into the air, and when the body of the ball fires, it will appear to the beholders like a fiery globe, with a ſtream or blaze like as if a comet or blazing ſtar were aſcending or deſcending, according to its height or declination.

To try the goodneſs of powder, that you may know its ſtrength.

Obſerve whether it be well dried and corned, which you have taken notice of, and approved, lay a few corns ſcattered on a ſheet of white paper, and fire them; then if they leave a black and ſooty mark behind them, with a noiſome ſmell, and ſinge the paper, then is that powder groſs and earthy, and will fail your expectation, if you uſe it in your fire-works; but if in the ſprinkling and firing there appear few or no marks, or thoſe of a clear blueiſh colour, then it is airy and light, well made, full of fire, and fit for ſervice; half a pound of it having more ſtrength than a pound of the other.

And thus reader, have I given you an inſight into the making fire works, &c. Such as are very pleaſing, and now uſed on occaſions in all Chriſtian countries, in making which, by a little practice, you may ſoon be perfect.

St George and the Dragon fighting, &c. Alſo Mermaids, Whales, &c.

Form your figures of paſte-board, ſtrengthened with wicker ſmall ſticks within paſted to the board to keep it hollow, tight and bearing out; and place a hollow trunk in the body for a large line to paſs through, and likewiſe for a ſmaller to draw them to and from each other, that they may the better ſeem in combat, which muſt be faſtned at the dragon's breaſt, and let one end of the cord be tied, which muſt paſs through the body of St George, turning about a pully at the other end, and faſtning it to his back, and tie another at his breaſt, which muſt paſs thro' the body of the Dragon, or a trunk at his back

and ſo returning about a pully at that end, it muſt be drawn ſtrait, and faſtened to the dragon's tail; ſo that as you turn that wheel, they will run furiouſly at each other, and as you pleaſe, you may make them retreat and meet again, ſoaping the lines to make them ſlip the eaſier. At the Dragon's tail, in his mouth and eyes, you muſt fix ſerpents or ſmall rockets. which being fired at their ſetting out, will cauſe a dreaful ſight in a dark night.

Thus a mermaid or a whale may be made to float on the water: but then the figure muſt be fixed on a convenient piece of board, with two fire wheels fixed on an axle, run through the poiſed part of the body, by the force of which it moves in a ſwift line in the water; the wheels muſt have little rockets or ſerpents tied round them, as the girondel before mentioned.

A Fire Drake on a line.

Having made the figure of paſte-board to the proper form of a dragon, with paſte board and wicker as has been taught before, make a hollow trunk through the body of it for a great line to paſs through, and faſten ſmall lines to draw it to and from you, at the breaſt and tail of the drake; put into the eyes, mouth, and tail of it rockets ſo fixed, that they cannot fly out, as you may put wild fire rowled up hard and long in paper; then fire that in the eyes and mouth firſt, and draw it with pullies from one end of the line to the other. then that at the tail, and draw it back, and it will ſeem retreating from danger, with fire coming out of the belly of it.

A burning Caſtle and a Dragon on the Water.

Make the dragon of paſte board and wicker, as before, the bottom of the caſtle of light wood, and the work of paſte board with paper, turrets, and battlements of a foot height, in the portal of the caſtle faſten a line, that it may come level with the water, and therefore ſome part of the caſtle muſt be under water: this line muſt be faſtened on the other ſide of the water, or in the water, if it be broad, and admit not of the former on a pole or ſtake knocked down. and paſs in a hollow trunk through the belly of a dragon, and being in the caſtle, may upon

firing the rockets, placed advantageously in the tail, eyes and mouth, come out of the caſtle and move on the line: to meet which, you may at the other end of the line, in the ſame manner, prepare a Neptune in a chariot or riding on a ſeahorſe with a burning trident, or whale with a rocket or wild fire in his mouth; then by a train fire ſome little paſte-board guns in the caſtle, which if the compoſition of the train be made of wild fire or ſtouple, will go off by degrees, and coming to a train of brimſtone, roſin and powder, make the whole frame expire in a terrible blaze.

A wheel of fire works to run backwards and forwards on the ground.

Procure a pair of wheels, being of light wood, like that of a ſpinning wheel, faſten them on an axletree, and place rockets round them, as bands are faſtened round a wheel, and ſo primed at tail and head, that when one expires, the other may take fire, half of them placed with their heads and tails the contrary way to the firſt: ſo that when the firſt are ſpent and the wheels have run on plain ground, a great way, the others firing, will turn them again, and bring them to the place where they firſt ſet out.

A fire that will burn in the water, or water ball.

Sow up a caſe of canvaſs like that of a foot-ball, but leſſer, pitch or glue it over; then take one pound of powder, eight ounces of roch alom, four ounces of life ſulphur, two ounces of camphire; linſeed oil, and that of petroleum, each an ounce and half; an ounce of oil of ſpike, with two ounces of colophonium buriſed, and well mixed together, and ſtuff the ball hard with it, with a ſtick pitch or glue it over again, binding it with marline or pitch, on that leave two vents for port fire, ſet it on fire, trundle it on the water, and it will burn under it.

AN

English Spelling Dictionary.

A B R	A C C	A D M
Abandon	abridgement	accountant
abaſe	abroad	accoutrement
abaſement	abrupt	accumulation
Abaſhment	abceſs	accuracy
abate	abſcond	accurſed
abatement	abſence	accuſation
abbacy	abſolve	accuſer
abbeſs	abſolute	acid
abbot	abſtemiouſneſs	acknowledgment
abbreviate	abſtract	acquiſition
abbreviation	abſtraction	action
abbutals	abſtruſe	actor
abdicate	abſurd	acute
abdication	abundance	adapt
abdomen	abuſe	adder
abet	academy	addition
abettor	acceleration	addreſs
abhor	accept	adequateneſs
abhorrence	acceptableneſs	adhere
abject	acceſſory	adjacent
abjection	accident	adieu
ability	accidentalneſs	adjoin
abduration	acclamation	adjournment
able	accommodate	adjure
abnegation	accommodation	admeaſurement
aboard	accompaniment	adminiſter
aboliſhment	accompany	adminiſtration
abominable	accomplice	adminiſtratorſhip
abomination	accompliſh	admirableneſs
abortion	accompliſhment	admiralty
abound	accord	admire
abrenunciation	accoud	admit

15 63 MAR

AGI	ANA	AZU
admoniſh	agility	anceſtors
adopt	agitate	anchovy
adorable	agonize	animadverſion
adornment	agreeableneſs	animalcule
advancement	agreement	anniverſary
advantageous	agriculture	annoy
adventitious	agrimony	antichamber
adventure	aground	antimonarchical
adventurous	alabaſter	antichriſtianiſm
adverſary	albeit	antipodes
advertiſement	alchymiſt	apocrypha
advice	aldermen	apoplectic
adult	alegar	apparatus
adulteration	algebra	apparition
advocate	alien	applicable
advowſon	aliment	archdeacon
affability	allegiance	archbiſhop
affair	allegorical	archetype
affectation	alleviate	argumentation
affection	alligation	armada
affectionate	alligator	arraignment
affectionateneſs	allowance	arrogance
affective	almanack	arrogate
affiance	Almighty	arſenal
affidavit	aloes	aſparagus
affinity	alphabetically	aſpiration
affirm	already	aſſociate
affirmatively	alteration	aſſwage
affix	alternate	aſſoniſh
affluence	amain	aſtriction
afford	amaſs	aſtrologer
affranchiſe	amercement	aſtronomy
affray	amicableneſs	attrocious
affront	amuſement	attribute
affuſion	anabaptiſt	avail
aforehand	anagrammatiſt	avarice
aggrandize	analogy	auctioneer
aggravate	analyſis	authority
aggravation	anarchy	axle-tree
aggreſſion	anathema	azure
agile	anatomy	

BAR	BEA	BEV
B	Barneſley	beauty
Batchelor	Barnet	beaux
backſlide	Barnſtaple	Beckernet
backward	barometer	Beckingham
backwardneſs	barrack	Beckles
bagnip	barricado	becomingneſs
bag pipe	barrier	bedaggle
bailiff	barriſter	Bedall
bailiwick	Barſtead	bedaub
balance	barter	Bedford
balcony	Barton	Bediford
balderdaſh	baſe	Bedlam
baldneſs	baſhful	beech
bale	Baſil	Beelzebub
baleful	baſilisk	beeſom
ballad	Baſingſtoke	beggary
ballaſt	Baſſa	belabour
balluſtrade	Baſſaley	beldam
Bamburg	baſſet	beleaguer
Bampton	baſſoon	Belford
Banbury	baſſrelief	beltery
banditti	baſtile	Belgian
bandolier	baſtinado	Belgic
bane berry	baſtion	bellow
baneful	baſtwick	belſwagger
Bangor	battoon	Beltingham
banker	battalia	Belvidere
bankrupt	Bautre	Belvoir-caſtle
Banſtead	bawdry	bemire
Barbadion	Bayborough	Bemiſter
Barbadoes	baynard	bergamot
barbarian	Beachley	Berlin
Barbary	beacon	beſpeckle
barbed	Beaconsfield	beſprinkle
barbel	beadle	beſtridden
barbels	beadſman	Bethkelert
barber	beard	bethought
Barbican	beaſt	Betley
Barmore	beatific	betony
Barmete	beau	betroth
Barnby	beaver	bevel

BLE	BOS	BUC
beverage	Blendor-haſſet	boſſes
Beverley	blindfold	Boſton
Bewdley	blinkard	botanical
bewildered	Blithe	botcher
bewitch	blockade	botchingly
Bewmauris	blockhead	bought
Biceſter	bloodſhed	bolting-mill
bidder	bloodſhot	bounce
bigotiſm	bloſſom	boundary
bilander	blowze	bounteouſneſs
bilboes	blunder	bowelled
Bilderſton	bluntneſs	bowling-green
bilious	boaſter	Bowtel
Billericay	boatſwain	boyiſh
billet-doux	bobtail	braggadocio
Billingford	bodice	brainleſs
Billingham	boggle	brand iron
binder	boggy	brandiſh
Bingham	boiler	brandling
biographer	boiſterous	brandy
bird-call	boldneſs	Braſil
Bird-lime	bolſter	bravado
Birmingham	Bolton	brawler
biſhoprick	bombardier	brawn
biſſextile	bombaſt	brawneſs
bittern	bombazine	breaſt-plate
bitumen	bondage	breeches
blabber	bonefire	breeding
Blackburn	bongrace	Brentford
black moor	bonnet	breviary
blackneſs	booby	brew houſe
blackſmith	book-binder	Brickhill
bladder	book keeping	bride-groom
Blaize	bookſeller	Bridewell
blameable	book-worm	brigade
Blandford	booriſh	brigandine
blanket	bopeep	brigantine
blaſpheme	bordage	Brokenhurſt
blazon	borrower	browantler
bleak	boſcage	brow-beaten
bleat	Boſphorus	buckſomeneſs

BUL
buckthorn
buckweed
Bucolics
bud
Buddeſdale
buddle
budge
budget
Budworth
buff
buff-coat
buffle
buffoonery
bug
Bugdon
buggerer
buggery
bugle
bugle-horn
buglos
build
builder
building
built
bulb
bulbacency
bulbine
bulbous
bulfinch
bulge
bulk
bulkineſs
bulky
bull
bullace
bull-baiting
bull-beggar
bullet
bull-herd
Bullingbrook
bullion

BUR
bullock
bully-rock
bul-ruſh
bulwark
bum
bumble
bump
bumpkin
bunch
bunchineſs
bunchy
bun
bundle
bundle-wife
Bungaye
bung-hole
bungle
bungler
bunglingly
bunt
bunter
bunting
Buntingford
buoy
buoyant
buoying
bur
Burbich
burden
burdenſome
burdenſomeneſs
bureau
Burford
burgeſs
burgeſhip
burgh
Burghdere
burgher
burglar
burglary
burgmote

BUT
burgomaſter
burial
burleſk
burling iron
burley
burn
burnet
Burnham
burning
burning glaſs
burning-iron
burniſh
burniſher
Burnley
burnt
Burntwood
burr
burrel
burrow
Burrowbridge
burſe
burſer
burſt
burſten
burſtenneſs
Burton
Burtonferry
burt-wort
bury
buſh
buſhel
buſhy
buſily
buſineſs
buskin
buſs
buſt
buſtard
buſtle
buſy
but

GAM CAR CAS

butcher
butcherly
butchers broom
butchery
butler
butlerage
butlerſhip
butt
butter
butterfly
butter milk
butter teeth
buttery
buttock
button
buttreſs
Buxton
buy
buyer
buz
buzzard
by
By berry
by ends
By ford
by lander
by lands
by laws
by-place
by way
by-word

C

Calviniſt
calumniate
cambric
Cambridge
cameleon
Camelford
camlet
camomile
campaign

Campden
camphire
campion
Canary-bird
cancer
candidate
candid
Candlemas
candleſtick
candour
Canibal
canine
canker
Cannaſton
cannon
canonical
canoiſt
canonization
canonſhip
canopy
Canterbury
cantharides
Canticles
cantonize
canvaſs
capacious
capapee
caper
capillary
capital
Capitol
capitulate
capon
caprice
captain
captious
captive
capture
capuchine
carabineer
caravan

carbonade
carbuncle
carcaſs
cardamum
Cardigan
cardinal
carreer
careful
careleſs
Carew
cargo
carlings
Carliſle
Carlton
Carmarthen
Carmalite
carmine
carnal
Carnarvon
carnation
carnaval
Carnivorous
Carolina
carouſe
carpet
carpenter
carreer
carriage
carrier
carrion
cartel
Carteſian
Carthuſian
cartilage
Cartmel
cartridge
cafcade
caſhier
Caſſiope
caſſock
caſtaway

CEL	CHA	CHI
Caſtle-comb	cellarage	charitable
Caſtle-riſing	cement	charmer
caſtling	cenſor	charnel-houſe
caſtrate	centaur	chart
caſual	centinel	chartel
caſually	century	charter
caſualty	cephalic	chaſte
catacomb	Cerberus	chaſten
catalogue	cere cloth	Catham
catarrh	ceremonial	chattles
cataplaſm	certainty	chatter pye
cataract	certificate	cheap
cataſtrope	ceſſation	chequer'd
catchpole	chaffing diſh	cheek bone
catechetical	chaiſe	cheer
categorical	chalcedony	cheeſe
caterer	Chaldee	Chelford
caterpillar	chaldron	Chellingford
cathartic	challenge	Chelmsford
Catharine	chamber	Cheltenham
cathedral	chambering	Chepſtow
catholick	chamberlain	cheriſh
Cats aſh	chambermaid	Cherloury
Caterick	champaign	cherry ſtone
caterwawling	champion	cherubim
cavalcade	chancellor	Ceſham
cavalier	chance medley	Ceſhunt
cavalry	chancery	Chetelhampton
Caucier	chandler	chevalier
caveate	change	Chewton Mendip
caveer	channel	Chicheſter
cavern	chapelry	chicken
cavernous	chaplain	Chidingford
cauldron	chapman	chidingly
cauſtic	chaplet	chief
caution	Chapelborn	chieftain
cautiouſly	character	chilblain
Caxton	charcoal	child-bearing
Caxwold	chargeable	Childermas
celebrate	Charing	Childham
celerity	chariot	chimerical

CIR	CLI	COM
chimney piece	circumvent	cling
China	circumvolution	clipper
Chipcaſe	Cirencester	clock mark
Chippenham	ciſtern	clod-head
Chipping Norton	citadel	clog
Chipping Ongar	citation	cloiſter
Chirk-caſtle	cite	Clophill
chirographer	citron	cloſe
chirurgeon	civet	clothier
chatterling	civil	cloudineſs
chocolate	civilian	cloven
choice	clack	clowniſhneſs
choler	clad	club footed
Cholmondely	claim	clump
chorographer	clam	clunch
Chriſt	clandeſtine	cluſter
Chriſt-croſs row	clap	clutter
Chriſtendom	Clapham	Clyncorugh
Chriſtmas	Clare	coacervate
Chriſt's Church	claret	coach
chronologer	clarification	coadjutor
chubbineſs	clarion	Cobham
Chudleigh	claſh	cockatrice
Church Stretton	claſp	Cockermouth
church warden	clatter	coddle
churliſh	clave	co-efficient
chymical	claule	coffeehouſe
chymiſt	clay	Cogeſhall
chymeſtry	clean	cognate
Ciceronian	clear	co-heir
circumference	cleft	co-herence
circumflex	clemency	cohobation
circumfuſion	Clement	coition
circumjacent	clenchers	colander
circumlocution	clergymen	Colcheſter
circumpoſition	Clevedon	collerage
circumſcription	claw	collection
circumrotation	Cleydon	colliſion
circumſpection	click	colloquy
circumſtantial	Cliffe kings	columbine
circumvallation	climacterical	combate

CON	CRU	CZA
comber	controverſy	crumb
Comberton	contumely	cryſtal
combination	convent	cub
Combmerton	convulſion	cuckold
comedian	cook	cugdel
comfortable	copious	culmer
comical	coquet	culpable
comelineſs	Corbridge	cultivation
commandment	cordial	cumberſome
commemoration	corner	cunning
commencement	coronation	cupboard
commenſuration	corpulence	cur
commodiouſneſs	corruption	curable
comparative	coſmography	curate
complaint	cottage	curb
complexion	cover	curdle
complement	counſellor	curioſity
comportment	courtſhip	curlew
comprehenſion	coward	currans
compreſſion	coxcomb	curry
concealment	coz	curſe
conciſe	cozen	curtain
concluſion	crab	curvet
concoction	crack	cuſtody
concubine	cradle	cuſtom
condemnation	craft	cut
confabulation	crag	cuz
confection	craggy	cycle
confirmation	crambo	cycloid
conformable	crane	Cyclops
congenial	crape	cygnet
conjecture	cravat	cylinder
conjunction	crawl	cymbal
connexion	crayon	cynic
conquer	crew	cynical
conſcience	crimſon	cyon
conſignation	crocodile	cyphon
conſubſtantial	crookedneſs	cypreſs
conſumption	crowd	czar
contemplation	Croyden	czareſs
contradiction	crucifix	czarina

DEC DER DIS

D

Dagon
dainties
Dalmatia
Dalmatick
Dalton and Caſtle
damageable
damnable
dampiſhneſs
Danby
dandelion
Dane gelt
dangerous
Darby
Darisbury
Darlington
Dartford
Dartmouth
Daventry
St. Davids
daughter
dauntleſneſs
Dauphin
dazzlingneſs
deaconſhip
Deal
deambulation
deanſhip
death-watch
debauchee
debenture
debonairneſs
Debrough
Decameron
decampment
deceitfulneſs
deceiver
December
decemvirate
deception
decimation

decipher
deciſive
declaimer
declaratively
decoction
Dedlington
dedicate
dedication
deducible
defamation
definition
deformation
degenerateneſs
delectation
delegate
deliberation
delicacy
deliciouſneſs
delightful
delineate
delineation
delinquent
delirious
deliverer
demi god
democracy
Denton and Hall
denunciation
Denzil
Dependale
dependance
deplorable
depoſition
depravation
deprivative
deputation
Dereham
derivation

derorate
deſcription
deſignation
deſolation
deſperado
deſpicable
deſpiſe
deſpiteful
deſpond
deſpotic
detect
determine
deteſtable
dethrone
detracter
diabetes
diabolical
diagnoſtic
dialling
dialogue
diamond
diametrical
dictator
dictionary
Didmerton
Dieping Market
difficult
diffuſe
Digby
digeſtion
dilemma
diligence
dilucidate
dimenſion
diminution
diocetan
diploma
direction
diſadvantage
diſagreeable
diſappoint

DIS	DOR	DUS
diſband	diſaſteful	doteril
diſburden	diſtemper	doubtful
diſcipline	diſtiller	Dove and Caſtle
diſcomfiture	diſtinction	doughtineſs
diſcommode	Diſtington	Douſable
diſcompoſe	diſtinguiſh	Downham
diſconſolate	diſtraction	downward
diſcontent	diſtreſs	doxology
diſcontinue	diſtributor	drapery
diſcountenance	diſtruſtful	drawback
diſcredit	diſturbance	draw bridge
diſcreet	dittander	dreadful
diſcriminate	diverſify	dreamer
diſdain	divertiſement	dredging-box
diſencumber	dividend	dripping pan
diſfranchiſe	divination	driveller
diſgraceful	divinity	Droitwich
diſhoneſty	divorcement	drollery
diſingenuous	divulge	dromedary
diſlocate	Di-la-ſol-re	dropſical
diſloyal	docibility	drudgery
diſmember	Doking	drugiſt
diſobedient	Dokley	Druids
diſoblige	doctorſhip	Drumborough
diſparage	document	drum major
diſpatch	Dodbrook	Drumſton Caſtle
diſpenſer	doggedneſs	dubiouſneſs
diſpleaſure	Dolbenmen	Dublin
diſpoſſeſs	dolefully	ducatoon
diſprove	Dolgad Van	dudgeon
diſpute	Dolgelle	dukedom
diſquiet	dolphin	dulcimer
diſrepute	domeſtic	Dulverton
diſreſpectful	domineer	dumbneſs
diſſatisfactory	dominical	Dunchurch
diſſemble	donation	Dunſton
diſſenſion	Doncaſter	dunghill
diſſimulation	Dorcheſter	Dunnow
diſſolvable	dormitory	Dunnington
diſſolute	Dorp	Dunſtable
diſſwade	Dorſet	duskineſs

EBO

duskiſh
dusky
duſt
duſter
duſtineſs
duſty
Dutch
duteous
dutiful
dutifully
dutifulneſs
duty
duumvirate
dwale
dwarfe
dwarfiſh
dwell
dweller
dwelling
dwindle
dyer
dyers weed
Dynas-Mouth
dynaſty
dyſcracy
dyſentry
dyſury

E

Earl
earneſt
ear ring
earth
earth quake
ear wig
eaſineſs
Eaſt-Ham
Eaterton
Eaton
eaves-dropper
Ebionites
ebony

ELA

ebullition
eccentric
Eccles
eccleſiaſtic
echo
eclipſe
ecliptic
eclogue
ecſtacy
edacity
eddy
Eden
edict
edification
edifice
edition
education
efface
effectual
effeminate
efficious
efficient
effigies
efflation
effluvium
efflux
effort
effrontry
effulgence
effuſion
egeſtion
Egleſtonbridge
egregious
Egremont
Egypt
Egyptian
ejaculation
ejection
Ela
elaborate
E-la my

EMB

Eland
elapſe
elaſticity
elder
electon
election
elegance
elegy
elemental
elephant
elevate
eleven
Elham
Elhill
eligible
elixir
Eleſdon
Elleſmere
ellipſis
elogy
eliope
eloquence
eloquent
Elſtre
Eltham
elucidate
elucubration
eluſion
Elyſian
Elzivir
emaciate
emaſculate
emblame
embalm
embargo
embark
embaraſs
embaſſy
embattle
embelliſh
embezzle

ENF	EPA	EST
emblem	engage	ephemeria
emboſs	engine	Ephialtes
embowed	engrave	ephod
embowel	England	epicure
embrace	engroſs	epicurean
embrocation	enhance	epidemical
embroider	enigma	epigram
embroil	enjoy	epileptic
embryo	enlarge	epilogue
emerods	enlighten	epiſcopacy
eminent	enmity	epiſode
Emley	ennoble	epiſtle
emolument	enormity	epithet
emotion	enrage	epitome
empannel	enrich	epitomize
emperor	enrole	Epping
emphaſis	enſample	Epſom
empire	enſhrine	Epworth
employ	enſign	equal
empreſs	entablature	equator
emulate	entail	equilateral
emulgent	entangle	equinox
emulſion	entendre	equip
enamel	entercourſe	equity
encamp	enterprize	equivocal
enchant	entertain	eradification
enchiridion	enthral	Ercol and Caſtle
encloſure	enthrone	erector
encourage	enthuſiaſm	eremitical
encroach	entice	erratic
encumber	entity	error
endear	entrails	eſcheat
endive	entrap	eſchew
endow	entreat	eſcurial
endure	enulcerate	eſcutcheon
enemy	envious	eſpouſals
energy	environ	eſquire
enervate	enumerate	Eſſenes
enfeeble	enunciation	eſtabliſh
Enfield	envoy	eſtimate
enfranchiſe	expect	Eſtri Divodoch

EXP EZR FAT

eternal
Ethiopian
etymological
evacuate
evangelical
euchariſt
event
eventilate
evermore
everſhalt
Evetham
evitable
Eunomians
Euphrates
Europe
evulſion
Ewell
exactor
exchequer
exclaim
exclude
execute
exemplary
Exeter
Exmouth
Exodus
exonerate
exorbitant
exorciſe
expand
expatiate
expectation
expedient
expedition
expel
expenſive
experiment
expertly
expiration
expire
explain

explanation
explication
explicit
explode
expound
expreſs
expulſion
expunge
extend
extent
exterminate
external
extinguiſh
extirpate
extol
extort
extract
extraordinary
extravagant
extreamly
extricate
extrude
extruſion
extuberance
exuberance
exuberant
exuberantly
exulcerate
exulceration
exult
exultation
exuperable
eye
eye-bright
eye-brow
eye-ſight
eye-ſure
eye-teeth
Eytox
Ezekial
Ezra

F

Fabulous
facetious
facilitate
facility
faction
factor
faint-heartedneſs
Fairford
Fairleigh
fairy
faithful
falcon
fallacious
fallible
Falmouth
falſifier
familiar
familiſt
famine
famous
famouſly
fanatical
fantaſtic
fantaſtical
fantom
fardingale
Farnham
farinaceous
farmable
Farnbrough
Farnham
farrier
Fardingdon
farthing
faſcinate
faſhionable
faſtidious
faſtneſs
faſting
fatality

FIC	FLA	FLO
fatherleſs	fictitiouſneſs	flagitious
fatigue	fiddle	flagrancy
faulchion	fidelity	flagrant
favourable	fierceneſs	flagrantneſs
fawningly	firineſs	flambeau
fearfully	fifteenth	flamiferous
February	figary	flanconade
Feckinham	figment	Flanders
fecuient	figurative	flanker
fecundity	filament	flaſhineſs
federal	filanders	flatneſs
feebleneſs	Filey	flatterer
fecilitate	filiation	flatulent
fell-monger	filigrane	flauntingneſs
fellowſhip	fillip	flaxen
felonious	filter	fleetneſs
Felton	filthineſs	flegmatic
female	filterate	Flemiſh
feminine	filtration	fleſhineſs
feoffment	finable	fleſhlineſs
fermentation	finance	flexanimous
Fermingham	find	flexibility
ferocity	fineneſs	flexibleneſs
Ferrybridge	finger's-breath	flimſineſs
Ferryhill	finical	flimſy
fervent	finiſher	flinchers
fervency	finiteneſs	flippant
fertile	firmament	flippantneſs
fervently	firmly	flittermouſe
feſtival	firſt	flixwee
fetlock	firſtling	flotage
feudal	fiſcal	Flora
feveriſh	fiſher man	Florence
Feverſham	Fiſhgard	florentine
fewel	fiſtula	florid
F-fa ut	fixedneſs	floridneſs
fibber	fiz gig	flounce
fiber	flabbineſs	flounder
fiberous	flaccidneſs	flouriſh
ficklenеſs	flagelet	flouter
fictitious	flagging	flower de luce

FOR

fluctuate
fluctuation
fluellin
fluently
fluidity
flummery
fluster'd
fluxibility
focillation
fodder
foggiſhneſs
foible
Fokinham
foldage
foilage
follower
fomentation
fondling
fontanel
fool hardineſs
fool hardy
fooliſhneſs
footman
foppery
foppiſhneſs
forbearance
forbidden
forceps
forcible
fordage
Fordingbridge
fore appoint
fore armed
fore caſt
fore-cloſe
for-deem
fore door
fore fathers
fore-finger
fore front
fore gñer

FUL

fore judge
fore know
fore knowledge
fore noon
fore-ordain
fore runner
fore ſpeak
fore teeth
fore thought
forgetful
formality
fornication
forſake
forth coming
fortitude
fortunate
forward
Foſton
Foulkton
foulneſs
foundation
foundling
Four Croſſes
fourteenthly
Fowey or Foy
fowling piece
Fowr-hope
factiouſneſs
fragrant
fragrantneſs
frailty
France
fraternity
freehold
friendſhip
frolicksomeneſs
fructification
frugality
frying pan
furiouſneſs
futurity

GAR

G

Gaddingly
gaggle
gainfully
Gainsborough
gain-ſtand
galbanum
Galenical
galeons
galiantry
gallery
galley
galleo foiſt
galley-pot
Gallican
galliciſm
gallion
gallop
galloway
gallon
gambol
gameſome
gameſter
gammot
gamut
gang
Ganges
Ganymede
garbler
garbles
gardener
gargariſm
gargarize
garland
garment
garniſh
garnither
garniture
garretteer
garriſon
garrulous

GEO	GLO	GRA
Garſtang	geomancy	glorification
Garthley	geometrician	glorioufneſs
Gaſcoigne	Georgics.	gloſſegrapher
gaſtlineſs	geo'copy	glow worm
Gates head	St. Germain.	glutinous
Gatton	germination	Gnatho
gandine's	gerundive	gnomonics
gaudy	geſtation	Gnoſtics
gavel-kind	geſticulation	goaler
gavelock	Gateabridge	goatiſh
Gayton	gew gaws	goatiſhneſs
gaze hound	ghoſtlineſs	gobblet
gazette	ghoſtly	Godalmin
gazetteer	giant	Godfather
geeſe	gibble gabble	Godmother
geldable	gibbous	Gofford
gelding	giddineſs	Gofforth
geminate	Giggleſwick	gogle ey'd
gemination	giglet	goldilocks
geminary	gilder	Golgotha
gemmow	gilliflour	Gomer
genealogical	ginger bread	gondolier
generaliſſimo	gingler	gonorrhœa
generality	girl	gooſeberry
generation	girt	gorgeous
generoſity	Gisbon	gorgandizer
generouſneſs	Gisborough	gormandize
Geneſis	gizzard	goſpeller
Geneva	gladiator	goſſipings
genial	gladneſs	Gothic
genticulate	Glandſor	Goths
gennet	glanders	St. Goven
genteel	Glaſſenbury	governableneſs
gentian	glazier	governeſs
gentiliſm	gleam	government
gentleman	glebe	goverror
gentlewoman	Glew great	gracefulneſs
gentry	glitteringneſs	graciouſly
genuineneſs	globular	gradual
geographer	Gloceſter	Grafton
geography	gloomineſs	Graies Thurrue

GER

grammarian
Grampound.
grampus
granadier.
granado
granary
grandame
grandee
grandeur
grandfather
grandmother
grandſire
grannum
grant
grantee
Grantham.
granter
granulation
graphically.
graſs
graſhopper
graſs-plat
graſſy
grateſulneſs
gratification
gratings
gratitude
gratulatory.
graveneſs
Graveſend
grayhound.
grazier
greaſineſs
greatneſs.
Grecian
Greciſm
Greece
green
green-houſe
greenneſs
Greenwich.

GYM

Gregorian
grew
grievouſneſs.
grimneſs
Grinſted
Griſmond
griſſel
grittineſs
grizlineſs.
groan
grocery
grogram
groom porter.
groop
groove
groſs
grotesk
grotto
grovelling.
ground-ivy
ground
grout head.
growl
grubbage
gruel
gruffneſs.
grumble
Grynton
guarantee
guardian
gudgeon
Guild hall.
Guilford
guiltleſs
guinea.
gun
gun-powder
guſh
gutter
Guy
gymnaſtics

HAR.

gymneſphilt
gyration
gyron

H

Habitation
hab nab
Hackney
haddock
Hadley
Hadenbridge
Hadſho
haggard
Haggerſton.
Hague
hainous
halbert
halcyon
Hales Owen.
Haleſworth
half-moon
Halifax
halliards
halloo
hallow
Haltfield
hamlet
hammer
hamper
Hampton
ham ſtring
handkerchief.
handmaid
handſomeneſs.
handy
hanger on.
Hanly
Hanmere.
hans-en-kelder.
happineſs
harangue
haraſs

HEA	HER	HOL
harbinger	heatheniſm	herring
Harborough	heavenly	Hertford
Harbottle-Caſtle	heavineſs	heſitate
hardy	Hebraiſm	heſitation
Hardwicke	hecatomb	heterodox
hair brain'd	hectic	heterogeneal
Haringworth	heedful	hexagon
hariotable	heifer	hexameter
Harleigh	heirloom	Hexham
harlequin	Helford	hickup
Harlotry	helialical	hidebound
harmful	hellebore	hideouſneſs
harmleſly	Helleniſt	hierarchy
harmonious	Helleſpont	hieroglyphic
harneſs	Hell hound	Highgate
harpooneers	helliſhneſs	Highworth
harpſichord	helm	highneſs
harſhneſs	helpful	Hilary
Hartlepool	helpfulneſs	Hilborough
hartſhorn	Helſton	Hindon
harveſt	helter ſkelter	Hingham
Harwich	hemicycle	Hinxley
haſtock	hemlock	hippocras
haſtineſs	Hempſted	hiſſing
Haſtingden	henceforth	hiſtorian
hateful	hen hearted	hiſtoriographer
Hatfield	herbaliſt	hithermoſt
Haverford	Herculean	Hittites
haughtineſs	hereditament	Hivites
havoc	hereditary	hoarſeneſs
hautboy	Hereford	hobgobling
Hawkſhead	heretically	hodge podge
hawſer	heretage	hoggiſhneſs
hazardous	Herling	hog grubber
headborough	hermaphrodite	hogſhead
Headon	heremetical	Holbeach
healthful	hermodactyl	holioak
hearkener	herenſhaw	holineſs
heart burn	Herodians	Holland
heartineſs	heorical	hollowneſs
heath cock	heroine	Holy-well

H U G	H Y P	J E W
Homage	hug	hyſteric
home	hugeouſly	hyſterical
homelineſs	hugger-mugger	hyſtericalneſs
Homer	Hugonut	I
home ſpun	humaniſt	Jacobite
homicide	humanize	jagged
homily	humanly	jail-bird
homogeneous	humbleneſs	Jamaica
homologous	humid	Iambic
honeſtneſs	humidity	jangle
honey-comb	humiliation	Janizary
honey-moon	humoriſt	jannock
honorary	Hunanby	Janſaniſm
honourable	hunch-back'd	January
hook	Hungary	Japan
hooked	hungrily	japanner
hopeful	hunks	jar
hopper ars'd	hurlers	jargon
hops	hurry	javelin
Horeb	hurt	jaundice
hore hound	hurtful	ichnography
horizon	husband	ichnograpical
horizontally	Huſſars	ideal
Hornet	Huſtings	identical
horological	hut	idiom
horoſcope	hutch	idiomatically
horridneſs	huzza	idleneſs
horſe leech	hydra	idolate
horſemanſhip	hydraulic	jealous
horſe-raddiſh	hydrographer	jeerer
Hoſanna	hydromel	Jeffrey
hoſpitable	hydrometer	Jehovah
hoſt	hydropical	jejune
hoſtile	hymn	jennet
hoſtileneſs	hyperbole	jeopardy
hot-cockles	hyperbolical	jerkin
hotneſs	hypochondriac	jeſſamin
hotch potch	hypocriſy	jeſter
houſhold	hypocrite	Jeſuit
hubble-bubble	hypoſtatic	Jeſus
huckſter	hypothetical	jeweller

IMM	IMP	INC
ignoble	immenſe	impoverſh
ignominious	immerger	impracticable
ignoramus	immerſe	imprecate
ignorance	immethodical	impregnate
ignoſcible	imminent	impreſs
illegal	immoderate	impreſſion
illegitimate	immodeſt	imprimis
illicit	immoral	imprint
illiterate	immoveable	impriſon
ill-natured	immunity	improbable
illogical	immutable	improper
illuminate	impale	impropriator
illuſion	impanel	improvable
illuſtrate	imparlance	improvement
Ilminſter	impartial	imprudence
imagery	impaſſable	imprudent
imaginary	impatience	impugn
imagination	impeach	impunity
imbalm	impede	imputation
imbargo	impenetrable	inaction
imbarkation	impenitence	inactivity
imbattle	imperative	inadvertancy
imbelliſhment	imperfect	inalienable
imbezzel	imperial	inamorato
imbibe	imperious	inanimata
imbitter	impertinence	inarticulate
imbolden	impetuous	inaugurate
imboſom	impious	inauſpicious
imbrication	implacable	incamp
imbroider	implead	incantor
imbroil	implicit	incapacitate
imbrue	implore	incapacity
imitable	imployment	incarceration
imitative	impolite	incendiary
imitator	imporous	incenſe
immaculate	importation	incentive
immanent	importune	inceſſant
immaterial	impoſition	inceſſantly
immature	impoſſible	inceſtuous
immediate	impoſture	inchanter
immemorial	impotence	incident

INC	INN	IXW
incircle	indearment	inobſervance
incitement	indebtor	inocu'ation
inclemency	indecency	inoffenſiveneſs
inclinable	indecorum	inrodinate
incloiſter	indefatigable	inquiet
incloſure	indelible	inquietneſs
include	indemnity	inrolment
incluſively	indenture	inſatiable
incognito	independent	inſatiableneſs
incoherent	index	inſcription
incommode	India	inſeparable
incompact	Indian	inſolent
incomparable	indicant	inſtrument
incompaſs	indictment	inſupportable
incompetent	indifferent	intemperate
incomplete	indigence	intendment
incompoſe	indignitate	intercommuning
incompoſed	indignation	interment
incongruous	indignity	interwoven
inconnexion	indirectly	inthralment
inconſiderate	indiſcreet	inveterate
inconſiſtent	indiſcretion	invincible
incontient	indiſcriminate	invulnerable
inconvenient	indiſpenſable	Joan
incorporate	indiſpoſed	Job
incorrect	indiſputable	jocund
incorrigible	inſtinct	joiner
incorrupt	inditable	iron
incounter	individual	irrecoverable
incourage	indiviſibility	Iſis
increated	indocible	Iſrael
incredibility	indolence	iſthmus
incredulous	indorſe	juſtification
incroach	indubitable	Juſtinian
incumbus	induce	juſtle
inculcate	induction	jutty
incumbent	indulgent	juvenile
incumbrance	indulto	juvenileneſs
incur	indurable	juvenility
incurable	indurate	ivy
incurſion	innumerableneſs	Ixworth

KIC KIT KNO

K

Kayage
kedger
keech
keelhalling
keen
keenneſs
keeper
keeve
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kell
Kellington
Kelmark
kelp
kelter
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kembo
ken
Kendall
Kenform
kenks
kennel
kennets
kerb
kerchief
Kermes
kern
kernel
kerſey
kerſtrel
Keſwick
ketch
kittering
kettle
Kettlewell
key key
Keyworth
kibe
kibe heels
kick
kickſhaw

kidder
Kidderminiſter
kidnap
kidnapper
kidney
kidney bean
Kigworth
kilbuck
kilderkin
Killgarren
Kilham
kill
killer
kiln
kimnel
kin
kind
kindle
kindly
kindneſs
kindred
Kineton
kingdom
king-like
kingly
Kingsbridge
Kingſcleere
Kingſton
Kingſland
kinſman
kinſwoman
kintal
kipe
Kirk Burton
Kirk-Oſwald
Kirkſop Foot
kirtle
kiſs
kitchen
kitling
kitten

kittle
klick
klittering
knack
knacker
knag
knaggy
knap
knappiſh
knappiſhneſs
knapple
knappy
knapſack
Knaresborough
knave
knaviſh
knaviſhly
knead
kneader
knee-holm
kneel
knee-ſtring
knell
knevels
knew
knick-knacks
knife
knight
knight-hand
Knighton
knit
knitter
knob
knobby
knock
knocker
knocking
knoll
knop
knot
knotted

LAP LEG LIK

knottily
knottineſs
knotty
know
knowingly
knowledge
knowl
knubble
knuckle
knur
knurling
Knickirth
Kyneton

L.

Labyrinth
lacrymation
Laconic
lactation
lady's bed ſtraw
lambent
Lamborne
lamkin
lameneſs
lamentable
Lammas
lampadary
Lanbiter
Lancaſter
Landaff
land call
Landrino
land-lopper
landſkip
Langport
language
Languard Fort
languidneſs
languor
lankneſs
lantern
lapidation

lapwing
larboard
larceney
larder
large
Larlingford
larmier
laſciviouſly
laſhers
laſſitude
Lateran
latitude
lattern
laudableneſs
laudanum
lavender
laughing-ſtock
Laving Eaſt
launders
lawleſs
lax
lay-brother
Layſtoff
Lazaretto
Lazaroſe
lazineſs
lead
leaf
leaguer
Learmouth
learning
leaſt
letcherous
lechery
lecture
Leeds
Leeke
leeſe
leetch
leeward way
legacy

legible
legiſlative
legitimate
Leiceſter
Lemington
lemonade
lenity
lent
leopard
leproſy
leis
Leſſian
Lettice
letter
Levant
levee
Liverpool
Levitical
lewdneſs
Lexicographer
Lexicon
liableneſs
libel
libellous
liberality
liberdine
libertine
librarian
license
licentiouſly
Litchfield
lictors
lie
Lieutenancy
life guard
lift
ligature
lightning
likelihood
likeneſs
licoriſhneſs

LOF

lilack
Lilburn
limberneſs
limbo
limner
limonade
limpneſs
line
lineament
lingerer
linguiſt
liniment
link boy
linſey
Linton
Lionel
liquable
liquatian
liquefaction
liquor
liſper
liſtener
litany
literally
litigation
litigious
Littleton
liturgy
livelihood
livelineſs
lixivious
lixivium
lizard
lobby
lob's pond
localneſs
locram
locuſt
location
lodgment
loftineſs

LOU

log
logarithm
logarithmical
logger head
logician
log wood
loin
loiterer
Lombard
London
loneſomeneſs
long boat
longanimity
longevity
longitude
Long Meg
Longnor
long ſhanks
long winded
looby
loof
looking glaſs
loom
loon
loop
loop lace
looſeneſs
lop
lopper
loquacious
loquacity
lordlineſs
lorimer
loſs
lot
lothſome
lottery
loudly
Loughton
lovingneſs
Lois d'Ors

LUX

louſineſs
Lough
Loughborough
Low-countries
lowneſs
Lowther
loxodromy
loyalneſs
lozenge
lubricity
lubrify
lucidneſs
Lucifer
lucky
lucrative
lucubration
Luddeſton
ludicrous
Ludlow
luff
Luſſenham
luggage
luidore
lukewarmly
luminous
lumpiſhneſs
lunacy
lunar
lunatic
lungwort
luſcious
luſtful
luſtineſs
lunatic
Luther
Luton
Lutterworth
luxate
luxation
luxurious
ly

MAJ MAN MAR

lycanthopiſt
lycanthrop
Lydford
lympha
lymphate
lymphatic
Lyn
Lyn-Regis
lyre
lyric
lyriſt

M

Maccabees
Macclesfield
mace-bearer
macerate
Machiavilian
macination
machine
mackrel
madam
mad-cap
madd ih
madneſs
madrigal
magazine
maggot
magic
magician
magiſterially
magiſtrate
magnanimous
magnet
magnificate
magnificence
magnify
mag pye
Mahometan
maiden
majeſtic
majeſty

mail
main maſt
main prize
maintain
maintenance
major
make hate
malady
Malaga
malapert
malecontent
malediction
malevolence
malice
maliciouſly
malign
malignancy
malkin
mallard
malleableneſs
Malling-Weſt
mallows
Malmsbury
malmſey
Malpas
maltſter
Malvern-Magna
Malvern Perva
Malwood Caſtle
mamma
mammock
mammon
management
Mancheſter
mandamus
mandatin
mandate
mandrake
manfulneſs
mange
mangle

mang
manhood
Manichees
manifeſto
mankind
manlineſs
manna
mannerly
Manning-tree
Mansfield
man-ſlaughter
manteau
mantlet
manual
manufactory
manure
manuſcript
maple
Marantha
marble
Marſhal-marſh
marchioneſs
Maresfield
Marforio
Margan
margin
margrave
marigold
mariner
marjoram
maritim
Markham
marker
marketable
Market-Street
Marlborough
Marlow
marmadale
marmalet
marmotto
marqueſs

MAT	MED	MER
marriage	mattock	mediator
Mars	mattreſs	mediatreſs
marſhal	maturate	medicable
Marſhalſea	maudlin	medicinable
marſh-mallows	maugre	medicinal
martagon	maulkin	medicinally
martial	maunder	mediocrity
martingal	Maundy	Mediterranean
Martlemas	mawkiſh	medullary
Martinmas	maw-worm	melancholic
Martock	maxillary	melancholly
martyr	maxim	melaſſes
martyrdom	Maximillian	Melicent
martyrology	May-day	melilot
marvel	mayor	meliorate
marvelous	mayoralty	melifluous
maſculine	mayoreſs	mellow
Maſham	May-pole	melodious
maſon	Mazzaroth	melody
maſquerade	mead	meltable
maſſacre	meadow	Melton Mombray
maſſineſs	meagre	member
maſterleſs	meal	membranaceous
maſter piece	mealy	membrane
maſterſhip	mealy mouth'd	memoirs
maſtich	mean	memorable
maſtiff	Menander	memorably
materiality	meaning	memorandum
mathematical	meanneſs	memorial
mathematics	meaſurable	memory
matins	meaſure	menace
matrice	meawing	mendicant
matricide	meazles	menial
marticular	meazly	menſes
matrimonial	mechanic	menſurable
matrimony	mechanically	menſuration
matrix	mechaniſm	mercantile
matron	medal	mercenary
matroſſes	medallion	mercery
matted	median	mercenarineſs
matter	mediate	merchandizing

MIG	MIS	MOR
merchandize	migration	Midhurſt
merchant	Milbrock	miſtinels
Mercury	mildew	miſuſe
merciful	mildoeſs	mittimus
Megram	Mildred	mixen
Meriden	millener	mixture
meridian	Milthorp	mob
meridional	Milton	mock
merit	mimic	Modbury
meritorious	mimical	model
Merlin	mimickry	moderate
mermaid	mindful	moderation
merriment	mineral	modeſty
Merton	Minerva	modefy
meſs	minew	modulation
meſſentry	mingle	moiſtneſs
meſſage	miniature	moleſtation
meſſenger	minion	Moloch
Meſſiah	miniſter	moment
meſſuage	miniſtration	monarchy
metal	minſtrelſey	Monday
metalline	minuet	mongrel
metaphraſt	miraculous	monkey
metaphor	mirror	monochord
meteor	mirth	monoply
metheglin	miſadventure	monſoon
method	misbecome	Montoniſt
methodiſt	miſcarriage	Montfort
metropolis	miſcellany	monument
Michael	miſchance	moody
Michaelmas	miſconſtrue	moor hen
micrography	miſdoubt	mope
micrometer	misfortune	moppet
microſcope	miſgovern	moreover
Midhurſt	miſlead	Morgan
Middleton	miſmanage	morn
Middlewich	miſname	Morocco
midſhipman	miſpend	Morpeth
Midſummer	miſreckon	Morpheus
miſ-ſhapen	miſtake	morrgage
mightily	miſtaken	Morton

MYT	NET	NIT
Moſes	N	nevermore
moſque	Narciſſus	Nevern
motherly	narrative	Nevin
moveable	nativity	neurology
moulder	natural	neutral
mountebank	naturalize	new fangled
Mouſhole	naughtineſs	Newgate
mourner	navigable	newneſs
mouth	nauſeous	Newark
much	Nazarene	Newborn
muck worm	nebulous	Newburgh
muddineſs	neceſſarily	Newbury
multiply	neceſſitous	Newbridge
multitude	neck cloth	Newcaſtle
Munſter	necromancer	Newmarket
Muntford	Needham	Newport
murky	needfulneſs	Nicene
muſcle	needle	niceneſs
Muſcovy	nefarious	nichils
muſic	negation	St Nicholas
muſhroom	nagative	nick name
musket	negligence	nick ninny
mutable	negociate	Nicolaitans
mutation	negociator	niece
mutter	neighbour	niggard
mutton	neighing	nightingale
mutual	St Neots	night raven
muzzle	nephew	night ſhade
myriads	nephritic	night walker
Myrmidons	Neptune	Nilometer
myrrh	Neride	nimble
myrtle	nergal	nimbleneſs
myſterious	nerval	nincompoop
myſteriouſly	nervous	nineteen
myſteriouſneſs	neſtling	ninety
myſtery	Neſtorians	ninthly
myſtical	Netherlands	nipperkin
myſticalneſs	nethermoſt	nipple
mythological	nettings	niſi prius
mythologiſt	nettle	nitrous
mythology	Nettlebed	nittineſs

NOR

nobleman
nobleneſs
nocturnal
noddy
nodouſneſs
noggin
noiſe
noiſineſs
nomenclator
nomenclature
nominal
nominate
nomination
nominative
non appearance
non compliance
non conformiſt
non conformity
Noneaton
nonentity
non naturals
non-plus
non-reſiſtance
nonſenſe
nonſenſical
non ſolvent
non ſuit
nook
nooning
nooſe
Normal
Norman
Norroy
Norſe
north
North-Allerton
Northampton
North-Bury
North Church
North Curry
northerly

NUB

North-Fleet
North-Foreland
North-Leech
northward
Northwich
Norwich
noſe
noſe gay
noſtril
noſtrum
notable
notary
notation
nothing
notification
notify
notion
notional
notoriety
notorioufneſs
Nottingham
notwithſtanding
Novatians
novel
noveliſt
novelty
November
novennial
nought
novice
novitiate
nouriſhing
nouriſhment
nouriſh
now
noxious
noxiouſneſs
nubble
nubbled
nubilous
nubiferous

R

OBL

nuddle
nudils
nudity
nugatory
nullify
numberleſs
numerable
numeral
numerator
numerous
num ſculi
nunciator
nuncupation
nuncupative
nuncupativeneſs
nunnery
nuptial
nurſe
nurture
nuſance
Nutley
nutmeg
nutrition
nutritive
nuzzle
nymph
nymphal

O

Oakham
oaker
oath
oatmeal
obduracy
obedience
obeiſance
obeliſk
obey
objection
objector
objuration
oblation

OCC	OIL	OPP
obligate	occupation	oilet-hole
obligatory	occupier	oilineſs
oblige	occur	ointment
obligee	occurrence	oiſter
obligement	ocean	Okeham
oblique	Okingham	Okehampton
obliterate	octangular	oker
oblivion	octave	oldiſh
oblivious	octavo	olcaginous
oblong	octogon	olifactory
obloquy	ocular	olitory
obnoxious	ocularneſs	Olympiad
obnubilation	oculiſt	Olympic
obſcene	Ode-hill	Oberſley
obſcenely	odious	ombre
obſcenity	odiouſly	Omega
obſcurity	odor	omen
obſequious	odoriferous	ominous
obſequies	odorous	omiſſion
obſervable	œconomy	omnipotence
obſervant	œconomics	omniſcience
obſervation	offend	omnipreſence
obſervator	offender	onerate
obſervatory	offenſive	Ongar-High
obſerve	offering	opacity
obſolete	offertory	opacious
obſtacle	office	opakneſs
obſtinacy	officer	open-arſe
obſtinate	officiate	operate
obſtreperous	officious	operation
obſtruct	officiouſneſs	operator
obſtruction	off ſcouring	ophaltic
obtain	off-ſets	opiate
obtrude	offſpring	opinion
obtruder	often	opinionated
obtruſion	oftentimes	opinionative
obviate	Ogborn St. George	opium
obvious	ogee	opponent
occaſional	ogle	opportune
occult	ogling	opportunely
occultneſs	oil-bag	opportunity

ORI	OST	OVI
oppoſition	oriental	oſteology
oppreſſion	original	oſtler
oppreſſor	originalneſs	oſtrich
opprobrious	Orion	Oſtrogoths
opprobrium	oriſon	Oſweſtry
oppung	Ork	Oſyth
optic	Orkneys	otherwiſe
optic-glaſs	Orlando	Otley
opulence	Orlop	Ottoman
opulent	Orlton	oval
oracle	Ormſkirk	ovation
oracular	ornament	oubut
orange	ornamentalneſs	oven
orangery	ornithologiſt	over-act
oration	ornithomancy	over-balance
orator	Oroonoko	over-bear
oratory	orphan	over-board
orb	orphaniſm	over charge
orbicular	Orpheus	over clouded
orbit	orpiment	over-done
orchard	Orrery	over eat
ordain	ortice	over-fill
ordalain	orthodox	over-grown
orderer	orthogonal	over-haſtineſs
orderlineſs	orthographer	over-laden
ordinal	orthographical	over-march
ordinance	orthography	over plus
ordinarineſs	Orton	over power
ordinary	Orton Maddock	over-poiſe
ordination	orvietan	over-reach
ordnance	oſcitant	over-ſeer
ordonnance	oſcitation	over ſhadow
ordure	oſier	Overton
Oxford	Oſiris	over-top
organ	Oſmandſton	overture
organical	Oſmund-Royal	over.turn
organicalneſs	oſprey	over-value
organiſt	Oſtend	over weening
organization	offenſive	overwhelm
organiz'd	oſtentation	Ovid
orient	oſtentatious	Ovinghatn

PAL

oviparous
Oulney
ounce
Ouſe
out-landiſh
outward
outlawry
outragious
outrun
outwardly
out-works
ouzel
Owen
owler
owner
Oxford
Oxwich
oxygon
oyer
oyez
ozier

P

Paddington
paddle
padlock
padnag
Padſtow
Padua
paganiſm
pageant
pagod
Pamphill
pain
Pain's Caſtle
painful
painim
paint
painter
paintſtrainer
palace
palatable

PAP

Palatine
paleneſs
palinody
paliſh
Palladium
pallate
palliation
Pall-Mall
palmer worm
palmeſtry
palm tree
palpable
palpitation
Palſgrave
palſy
paltry
pamper
pamphlet
pan
panado
pan cake
Pancras
pancreas
Pandects
pander
Pandora
panegyric
pangs
panic
pannage
pannel
pannier
pant
panting
pantaloons
Pantheon
panther
pantofle
pantry
papacy
papiſm

PAR

papiſt
papiſtry
pappa
Papplewich
pappineſs
par
parable
parabola
parabolical
Paracelſus
paradiſe
paradox
paragraph
parallel
paralytic
paramour
paraphraſe
paraphraſtical
paraſceve
parboil
parcel
parchment
pardon
pardoner
parentage
parentheſis
partitioner
parley
parliament
parliamentary
parlour
parmeſan
parochial
parole
parricide
party
parſimonious
parſimony
parſley
parſnip
parſon

PAT	PEN	PER
partake	patriot	pencil
partial	patriotiſm	pendant
participate	patrol	Pendennis Caſtle
participation	patron	pendulum
participial	patronage	penetrable
particle	patronize	penetrate
particular	patty	penetration
particularly	paucity	Penguin
parting	pave	peninſula
partiſan	pavilion	peniſtone
partnerſhip	pauſe	penitent
partridge	pawn	pen-knife
paſh	pawnbroker	pennant
paſquin	payable	pennileſs
paſſable	payment	Pennyſtone
paſſage	peacock	Pennyſont
paſſenger	pearmain	pennyroyal
paſſibleneſs	peaſant	Penruddock
paſſible	pebble	Penryn
paſſion	peccadillo	Penſance
paſſionate	peccavi	penſion
paſſive	pectural	penſionary
paſſover	peculiar	penſive
paſſport	pedagogue	penſiveneſs
paſtime	pedantic	pentagon
paſtry	pedigree	pentateuch
paſtry-cook	pedo baptiſm	Pentecoſt
patacoon	peerdom	penurious
patcher	peeviſh	pepper
patch box	peeviſhneſs	peradventure
patentee	Pegaſus	peragration
pathetic	Pelagians	perambulation
pathetical	pelican	perceive
patience	pelmel	perception
patientneſs	pelt-monger	perch
patriarch	Pembridge	perculation
patriarchſhip	Pembroke	perdition
patrician	penal	perduration
patrimonial	penalty	peregrination
patrimony	penance	peremptor
Patrigton	pence	peremptorily

PER

perenial
perfect
perfection
perfidious
perfidy
perforate
perforce
perform
perfume
perfunctory
perhaps
pericranium
perilous
period
periodical
peripatetic
periphery
periphraſtically
periſh
periſhableneſs
perjure
perjury
periwig
periwinkle
permanent
permiſſion
permit
permutation
pernicious
peroration
perpendicular
perpetrate
perpetual
perpetuation
perpetuity
perplex
perquiſites
Persbridge
Perſhore
Perſia
perſecute

PHI

perſeverance
perſevere
perſiſt
perſonable
perſonage
perſonality
perſonate
perſpective
perſpicuity
perſpicuous
perſpiration
perſuaſive
perſuaſion
perſuaſiveneſs
pertain
pertinacious
pertinence
pertinent
perturbation
Peru
pervade
perverſe
perverſeneſs
pervicatious
Peruvian
peſtilence
petardeer
Peterborough
Peter Church
Petersfield
Petherton-South
Petherton-North
petrification
pettiſogger
pettulancy
phantaſtical
Phariſee
pharmacentic
philanthrophy
Philip's Norton
philologer

POM

philoſopher
philoſophical
phlebotomy
phlegmaticneſs
Phoſphorous
phraſe
Phrygian
phyſic
phyſognomy
piazza
pickage
Pickering
Picts
pierce
pigmy
pilchard
plant
plantation
pleaſure
pliant
plough
plumb
plunder
Plymouth
pneumatical
poach
pocket
poetry
poinant
political
politician
poliſher
polite
poiling
Polverbatch
Polygamy
polygraphy
pomander
pome-citron
pomiferous
pommel

PUE PUR PYX

pompous
pond
ponderous
Pontepool
pontificate
Pontepolen
pope
popinjay
porcupine
pork
portcullis
porter
Portſmouth
poſitive
poſſeſſion
poſtage
poſterior
poſthumous
poſture
pc tentate
practicable
pragmatical
praiſe
prawn
preacher
precarious
precedence
predeſtinate
pre eminence
preference
pregnance
prejudication
prelate
premature
prenomination
pre occupy
prepoſterous
presbyterian
public
pudder
puerility

puffing
pugil
puiſſant
pulchritude
Pulford
Pulham
Pulhely
pullet
pulmonery
pulpit
pulſation
pulverization
pumice
pummel
pumkin
punch
punchanello
punchion
punctilio
punctuation
puncture
pungency
pungently
punger
punic
puniſh
puniſhment
punk
puppet
puppy
purblind
purchaſe
pureneſs
purgation
purgatory
purification
puritaniſm
purling
purloin
purport
purpoſe

purring
purſer
purſlain
purſuance
purſuit
purſuivant
Purton
purvey
purveyance
purulent
puſh-pin
puſillanimity
puſs
puſtalous
put
putaniſm
putative
putid
put off
putter
putrefaction
putrefy
putrid
putridneſs
puttock
putty
puzzle
pybald
pye
pygmy
pylorous
pyramid
pyramidical
pyramidiod
pyromancy
pyrotenchny
Pythagoras
Pythagorean
Pythoneſs
pyx

QUA

Q

Quadrageſima
quadrageſimal
quadrangle
quadrangular
quadrant
quadrantal
quadrat
quadrate
quadratic
quadratrix
quadrature
quadrimonial
quadripartite
quadriparition
quadriſyllable
quadrival
quadruple
quadruplication
quaffer
quag mire
quail
quaint
quaintly
quaintneſs
quake
quaker
quakeriſm
qualification
qualify
qualifying
quality
qualm
qualmiſhneſs
quar ; ry
quantity
quaretian
quarrel
quarreller
quarrelled
quarrelling

QUE

quarrelſome
quarrelſomeneſs
quarry
quart
quartan
quarter
quarter-day
quarteridge
quarterer
quarterly
quarter-maſter
quarter-round
quarter-ſeſſions
quartern
quarter-ſtaff
quarto
quaſh
quaver
quean
queen
Queenborough
queer
queerneſs
quell
queller
quench
quenchable
quencher
querent
queriſt
querk
querulous
query
queſt
queſt-man
queſtion
queſtionable
queſtionableneſs
queſtioniſt
queſtionleſs
queſtor

QUO

quibble
quick
quicken
quickly
quickneſs
quickſand
quickſet
quickſilver
quick-ſighted
quick-witted
quicky tree
quid
quiddany
quieſcence
quieſcent
quiet
quieter
quietiſm
quietiſt
quietly
quietneſs
quill
quilt
quince
quincunx
quinſy
quint
quintain
quintal
quinteſſence
quinteſſential
quintil
Quintilian
quire
quiriſter
quit
quit claim
quite
quit-rent
quiver
quoted

R

Rabbi
Rabbin
rabble
race
racket
rackoon
radiancy
radiant
radicalneſs
radical
radicate
raddiſh
radius
Radnor
raff
raffle
rage
rag-bolts
raggamuffian
ragged
Ragland-Caſtle
rag-man
ragoo
rail
railery
Raimund
rainbow
rain-deer
raip
raiſe
rake
rake hell
rakiſh
Raleigh
Ralpho
ramazan
ramble
ramage
Ramiſh
rammer
Ramsbury
Ramſey
ram's-head
rancid
rancour
Randal
random
ranger
rankneſs
rankly
ranſome
ranſomer
rantipole
rapacious
rapid
rapine
raparee
rapſody
rapture
rarely
rarity
raſcal
raſcally
raſe
Raſon-Market
raſhneſs
razor
ratafia
rather
ratification
ratify
rational
rats bane
rattle
rattle ſnake
ravelin
Raven glaſs
ravenous
raving
raving mad
raviſher
raze
reach
re-action
readineſs
Reading
re-admiſſion
re-admit
real
realize
realm
re-animate
re-aſcend
reaper
rear-guard
reaſon
re-aſſemble
re-aſſume
re-baptize
rebate
rebatement
rebel
rebellious
rebound
rebuff
rebuild
rebuke
recal
recant
recantation
recapitulate
recede
receivable
receiver
receiver-general
recent
recentneſs
receſs
Reche
recipe
reciprocal
reciprocate

RED	REL	RYE
recital	re-deliverance	reluctant
recitativo	Redford	remain
recite	rediculous	remarkable
reciter	redouble	remedy
reckoning	redound	remember
reclaim	Redruth	remit
recline	Red-ſea	remnant
recognition	reduction	remonſtrate
recognize	redundant	remorſe
recognizer	re-edify	removeable
recoil	re entrance	rencounter
recollect	re-eſtabliſh	rendezvous
recollection	re examination	renegade
recompence	reference	renovation
recommend	refinement	renounce
recommendation	reflexion	renown
recompenſe	reformation	rent
recompoſe	refractory	repair
reconcile	refreſh	reply
reconcileable	refulge	reprint
record	refuſal	reproach
recorder	regain	reproof
recover	regality	repute
recoverable	regard	reſemble
recount	regeneration	reſolve
recreate	regiment	reſolute
recruit	region	reſort
rectangular	regiſter	reſt
rectif	regret	rheumatiſm
rector	regular	rich
rectory	rehearſe	riddle
Reculver	reject	ride
recumbence	reign	river
recumbent	re-imbark	robe
recurrent	rejoin	rogue
recuſion	rejoice	royal
Redborn	relation	Roman
Redbridge	releaſe	rude
reddiſh	relent	run
redeem	relief	ruſh
redeemer	religion	Rye

SAL	SAT	SCA
S	ſalubrious	ſatisfaction
Sabellians	ſalver	ſatisfy
Sabines	ſalvo	ſattin
ſable	ſalutary	Saturday
ſabre	Samaria	Saturn
Sabridgworth	Samaritan	Saturnine
ſacerdotal	Samech	ſatyr
ſack-cloth	ſamphire	ſatyrically
ſacrament	ſampler	ſatyriſt
ſacred	ſanctification	ſavageneſs
ſacrifice	ſanctimony	ſauce-box
ſacrilege	ſanction	ſaucer
ſadden	ſanctuary	ſaucineſs
ſaddle	Sanbach	ſauſage
Saddleworth	ſandbag	ſave-all
Sadducee	ſand-blind	ſaving
ſafe-conduct	Sandbury	ſaviour
ſafeguard	ſand eels	ſaunter
ſaffron	Sandhurſt	ſavory
Saffron-Walden	ſandlin	Savoy
ſagacious	Sandwich	Savoyard
ſegely	ſandy	Sawley
Sagittary	Sandgate-Caſtle	Sawthey
ſaintoin	Sandgate	Saxmundham
ſalamander	Sandy Chapel	Saxon
ſalary	ſanguin	Saxony
ſale	Sanhedrim	ſcab
ſaleſman	ſanter	ſcabbard
ſalique	ſapleſneſs	ſcabbed
Salisbury	ſaraband	ſcabbedneſs
ſaliva	Saracen	ſcaffold
ſalivate	ſarcaſm	ſcaldo
Salkeld	ſarcaſtically	ſcalding-hot
ſally-port	ſarſenet	ſcalp
ſalmigundy	Sarſtreet	ſcamper
ſalmon	ſaſſafras	ſcandal
Saltaſh	Satan	ſcandalous
ſalter	ſatchel	ſcantineſs
Saltfleet	ſatellites	ſcar
ſalt-petre	ſatiate	ſcaramouch
ſalvage	ſatiated	Scarborough

SCR	SEC	SEN
ſcarcity	ſcreak	ſecretary
ſcare crow	ſcribe	ſect
ſcarlet	ſcriptural	ſectarian
ſcatter	ſcripturiſt	ſection
ſcavenger	ſcrivener	ſecularity
ſceleton	ſcrofulous	ſecureneſs
ſcene	ſcrutinize	ſedan
ſcenography	ſcud-away	ſedate
ſceptic	ſculk	Sedber
ſcepter	ſcull	Sedbury
ſcheme	ſcullion	Sedgefield
ſchiſm	ſculpture	Sedgewick
ſcholar	ſcum	ſediment
ſcholiaſtic	ſcupper hole	ſeditious
ſcholiaſt	ſcurrilous	ſeducer
ſchool	ſcurvineſs	ſeduction
ſchoolman	ſcutcheon	ſeek
ſcience	ſcymitar	ſeem
ſchool-divine	Scythia	ſeen
ſcimeter	Scythian	ſeethe
ſcirrhous	ſcythe	ſeize
ſciſſors	ſea-chart	ſeldom
ſcoffers	ſea-faring	ſelect
ſcold	Seaford	ſelf
ſcolding	ſea-gréen	ſelfiſh
ſcollop ſhell	ſeal	ſelf-evident
ſconſe	ſeamſter	ſelvage
ſcooper	Sean	ſemicircle
ſcorbutic	ſea port	ſemicolon
ſcore	ſearch	ſeminal
ſcornfull	ſear	ſemi vowel
ſcorpion	ſear-clot	ſenate
Scotch	Searn	ſend
Scotland	Searn-Abby	ſeniority
ſcoundrel	ſeaſonable	ſen night
ſcout	Sebaſtian	ſenſation
ſcraggy	ſecant	ſenſe
ſcramble	ſecceſſion	ſenſitive
ſcrap	ſeclusion	ſenſory
ſcraper	ſecondarily	ſent
ſcratches	ſecret	ſentence

SHO	SKI	SPI
ſhallow	Shrawarden	Skinningrave
ſhaloon	ſhrewdly	Skirking
ſhambles	Shrewsbury	skirmiſher
ſhame fac'd	ſhrivell'd	skittiſhneſs
ſharp	ſhubbineſs	sky colour
ſharper	ſhineſs	ſlab
ſharp-ſighted	Sicilian	ſlanderous
ſharp witted	Sicily	ſlaviſhneſs
ſhatter	ſickneſs	Sleaford
ſhaver	ſide-board	ſleeveleſs
Shaw Croſs	ſideral	ſlightneſs
Sheals N. and S.	Sidland	ſlipperineſs
ſhear man	Sidmouth	ſloe worm
ſheep cote	ſieling	ſlothfulneſs
ſheepiſhneſs	ſightleſs	ſluggard
Sheffield	ſignal	ſmackering
ſhelf	ſignet	ſmectymnuans
Shepham	ſignification	ſmitter
ſhepherd	ſignify	Smokington
ſhepherdeſs	Silcheſter	ſnap-dragon
Sherborn	ſilentneſs	ſneakingneſs
ſheriff	ſillabub	Socineaniſm
ſherry	ſilneſs	ſolemnization
Sherſton	Silverton	ſolicitude
ſhew-bread	ſilver-ſmith	Solomon's ſeal
ſhield	ſimonical	Somerſetſhire
ſhifter	ſimper	ſongſter
ſhilling	ſimplation	ſophiſtical
Shiloh	ſimulation	ſordid
ſhin bone	ſincereneſs	South-Mouldon
ſhingle	ſinewineſs	Southwould
ſhipwaſh	ſingleneſs	ſpacious
Shipwrack	ſingularity	ſpangle
ſhitten	ſirenizing	Spaniard
ſhittle cock	Sittingborn	ſpeaker
ſhop-keeper	Sittingham	ſpecify
ſhop-lifting	ſixteenthly	ſpectator
Shoreham New	skegger trout	ſpeech
ſhort ſighted	Skellingthrop	Sphinx
ſhoulder	ſkeptricalneſs	Spilsby
ſhoulder-knot	ſkilfulneſs	ſpinage

S P R	S Q U	S T A
ſpinal	ſpread	ſquinancy
ſpinet	ſprig	ſquint ey'd
ſpinner	ſpright	ſquire
ſpinſter	ſpring	ſquirt
ſpire	ſpring tide	St.
ſpirit	ſprinkle	ſtab
ſpiritual	ſprit-ſail	ſtable
ſpiritualneſs	ſprout	Stabridge
ſpite	ſpruce	ſtack
ſpiteful	ſprung	Stafford
ſpitefulneſs	ſprunt	ſtage
ſpittle	ſpud	ſtagger
ſplaſh	ſpue	ſtagnate
ſplain	ſpume	Stagarite
ſplatch	ſpun	ſtaid
ſplay-footed	ſpunge	ſtain
ſpleen	ſpunk	ſtairs
ſplendid	ſpur	ſtake
ſplendor	ſpuriouſneſs	ſtale
ſplenetic	ſpurkets	ſtaik
ſplent	ſpurn	ſtail
ſplice	ſpur-rail	Stamford
ſplit	ſpurt	ſtamp
ſpoil	ſpy	Stanbridge
ſpoke	ſquab	ſtanch
ſpokeſman	ſquabble	ſtandiſh
ſpoliation	ſquadron	ſtand
ſpondee	ſqualled	Stanford
ſponſal	ſqualley	ſtang
ſpontaneous	ſquander	Stanhope
ſpool	ſquare	ſtank
ſpoon	ſquareneſs	ſtannary
ſport	ſquaſh	Stanton
ſportful	ſquat	ſtanza
ſpot	ſquawl	ſtapple
ſpotleſs	ſqueak	ſtarboard
ſpouſe	ſqueal	ſtarch
ſpout	ſqueamiſh	ſtare
ſprain	ſqueeze	ſtarling
ſprat	ſquib	ſtarry
ſprawl	ſquill	ſtart
ſpray		

SIT	STR	TU
ſtartup	ſtink	ſtraw
ſtarve	ſtint	ſtray
ſtate	ſtipend	ſtreak
ſtateſman	ſtipulate	ſtream
ſtationer	ſtir	ſtreet
ſtatue	ſtirrup	ſtrength
ſtatute	ſtinch	ſtrenuous
ſtave	ſtiver	ſtreſs
ſtay	ſtock	ſtretch
ſtead	ſtocking	Stetham
ſteak	Stockton	ſtrew
ſteal	ſtoic	ſtricken
ſteam	Stoke	ſtrickneſs
Stebbing	ſtole	ſtride
ſtedfaſt	ſtomach	ſtrife
ſteed	ſtomacher	ſtrike
ſteel	Stone	ſtring
ſteep	ſtood	ſtripe
ſteeple	ſtook	ſtrive
ſteer	ſtool	ſtrode
ſteerer	ſtoop	ſtrole
ſtem	ſtop	ſtrond
ſtench	ſtore	ſtrong
ſtep	ſtork	ſtruck
ſtep father	ſtorm	ſtruggle
ſtep-mother	ſtory	ſtrumpet
ſteril	ſtote	ſtung
ſterling	ſtove	ſtubbed
ſtern	ſtout	ſtubble
ſtew	ſtowage	ſtubborn
ſteward	ſtraddle	ſtuck
ſtickle	ſtraggle	ſtud
ſticky	ſtraight	ſtudent
ſtiff	ſtrain	ſtuddy
ſtifle	ſtrait	ſtuff
ſtigmatical	ſtrake	ſtumble
ſtile	ſtrand	ſtunt
ſtill-born	ſtrange	ſtupendous
Stilton	ſtranger	ſtupid
ſtimulate	ſtrap	ſtupify
ſting	Stratton	ſtupifaction

SUP

Sturbridge
Sturminſter
ſtatteringly
ſtypticneſs
ſubaction
ſubaltern
ſub conſequence
ſubdiviſion
ſubdue
ſubjection
ſubjunctively
ſublieutenant
ſublimation
ſubmerſion
ſubmiſſiveneſs
ſubordinateneſs
ſubſcription
ſubſervientneſs
ſubſtantialneſs
ſubterraneous
ſubtraction
ſuccedanious
ſucceſsfulneſs
ſuccinctneſs
ſucculentneſs
ſuccumbent
ſudorificneſs
ſufficientneſs
ſuffumigation
ſuitableneſs
ſulphurous
ſummarineſs
ſumptuouſneſs
Sunderland
ſuperabundance
ſuperannuation
ſupereminence
ſuperexcellent
ſuperficialneſs
ſuperfluouſneſs
ſuperintendent

SYN

ſuperlativeneſs
ſupernumerary
ſuperſtitiouſneſs
ſupervention
ſupplentory
ſupportableneſs
ſuppreſſor
ſuperamundane
ſupremeneſs
ſureneſs
ſurgeon
ſurpaſſingneſs
ſurround
ſuſpect
ſuſpiciouſneſs
ſuſtenance
ſwagger
ſwarm
ſwear
ſweep ſtake
ſweet heart
ſwept
ſwimmer
ſwine herd
ſwiniſhneſs
ſwitch
Switzerland
ſwordſman
ſycophant
ſyllabically
ſyllogiſtically
Sylva
Sylveſter
ſymbolical
ſymmetry
ſympathetic
ſympathize
ſymphony
ſymptom
ſynagogue
ſynchroniſm

TAN

ſyncopation
ſynod
ſynodical
ſynonimous
ſynopſis
ſyntax
ſyntheſis
ſynthetical
ſyringe
ſyrup
ſyſtem
ſyſtole

T

Tabernacle
tablature
tabular
tacking
Tadcaſter
Taddington
Tafford-Bridge
tag-rag
tailor
Talbot
tale-bearer
taliſman
talkative
tallow
Tallow down
tally man
Talmud
Talmudical
Talyſarn
tamarind
tamely
Tammuz
tamper
Tamworth
Tangier
Tanhill
tankard
tantalize

TEN	THI	TIM
tantivy	tenderneſs	thief
tapeſtry	tenement	thieviſhneſs
tapeſter	Teneriff	thimble
taruntula	Tenterden	thinker
target	tent wort	thirſtineſs
tarniſh	Teraphim	thiſtle
tart	termagant	Thong Caſtle
tartane	termination	Thoan
Tartar	terraqueous	thornback
Tartary	terreſtrial	Thornbury
taſteleſs	terrible	Thorncomb
tatterdemalion	terrify	thorough
tattoo	Terting	Thorp
taverner	territory	thoughtful
Taveſtock	terror	thouſand
tauntingly	teſtaceous	thraldom
tautological	teſtament	thraſher
tautology	teſtify	threadbare
Taunton	teſtimonial	threefold
Taunton-biſhop's	teſtineſs	Threlked
tawdry	Tetbury	threſher
taxation	Tetſworth	throng
teachable	Tetterſhall	throtle
team	Teutonic	throwſter
technology	Tewkſbury	Thummim
tedious	texture	Thurſday
teleſcope	Thames	Thurſton
temperate	thankfulneſs	thwart
tempeſt	theatre	Tickhall
templar	theme	ticking
temple	Theocracy	tickle
temporal	theologian	tick tack
temporize	thereafter	St. Tiddy
tenable	thereupon	tidings
tenacious	thermometer	tightneſs
tenantable	thermoſcope	Tilbury
Tenbury	Therſton	tillage
Tenby	Thetford	tilt-boat
tendency	thicken	tilt-yard
tender-hearted	thicket	timbrel
tenderly	Thickham	timorous

TOW TRA TYP

timorouſneſs
tinker
Tinmouth
tinſel
tirewomen
Titchwomen
tirillation
tit mouſe
Tiverton
tobacco
Toceſter
Tockington
together
toilſome
toilſomeneſs
Toledo
tolerable
toleration
Toll-booth
tongue
tooth ach
toothſome
topaz
Topcliff
toper
Tophet
topography
Topſham
topſy turvy
torment
torrent
Torrington
torture
tory
St. Toſſel
Totneſs
touch-ſtone
toughly
tournament
toward
townſhip

toy-man
tractable
tractate
tradeſman
trade wind
tradition
traduce
trage comedy
trage comical
tragical
trainbands
train-oil
traiterous
tranquillity
tranſaction
tranſcend
tranſcribe
tranſcript
tranſer
transfiguration
transfigure
tranſuſe
tranſgreſs
tranſgreſſor
tranſient
tranſition
tranſitorineſs
tranſlation
tranſmigration
tranſmography
tranſmutable
tranſparent
tranſpiration
tranſpire
tranſplant
tranſport
tranſporter
tranſpoſe
tranſpoſer
tranſpoſition
tranſubſtantiation

transverſe
traſh
Travegarn
traveller
treacherous
treachery
treaſonable
treaſurer
Tegaron
Treleigh
tremble
trepanner
trepidation
trepidity
Treſhevimick
Trevilan
tribulation
tribunal
trickiſh
triennial
triflingly
Trigney
trigonometry
Trinitarians
Trinity
Tripoly
troubleſome
Tubal
Tuddington
Tudworth
Tuilleries
Tukesbury
tulip
tumour
tumourous
Tunbridge
turnpike
turnpike gate
Tweed
typographical
typographically

VAS VER VIA

typographer
typography
tyrannical
tyrannically
tyrannicalneſs
tyrannicide
tyrannize
tyrant
tyranny
tyro

V and U.

Vacuum
vade-mecum
vagabond
vagary
vagrant
vain glorious
vain-glorioufneſs
valedictory
valetudinary
valiant.
valid
validity
valorous
valuable
vambrance
Vandal.
vane
van-guard.
vaniſh
vanity
vanquiſh
vaporation
vapour
vapouring
variable.
variance
variation
variety
varlet
vaſſal

vaſt
Vatican
Vavaſor
Vaudious
vaulter
vaunt
veal
vegetable
vehemence
vehicle
vellum
velocity.
velvet
venal
venerable
veneration
venereal
venery
Venetian
venegeance
venial
Venice
venom
venomous
ventilation
ventureſomeneſs
venturous
Venus
varacity
verb
verbal
verbatim
verberate
verberation
verboſe
verboſeneſs
verboſity
verdant
verdigreaſe
verderer
verditer

verdure
verger
verification
verjuice
vermicular
vermiculation
vermillion
vermin
vernicular
vernal
verſe
verſicle
verſification
verſify
vertex
vertiginous
vertigo
vervain
very
veſicle
veſicatory
veſpers
veſſel
veſſes
veſt
Veſta
Veſtal
veſtible
veſtiger
veſtment
veſtry
veſtry-man
veſture
vetches
veteran.
vex
vexation
vexatious
ugly
ugline ſs
viol

VIN	VIS	UNA
viands	vine	viſibleneſs
viaticum	vineyard	viſible
vibrate	vinegar	Viſier
vibrating	vinew	viſion
vibration	vient	viſioniſt
vicar	vinous	viſit
vicarage	vintage	viſitation
vicarſhip	vintner	viſney
vice	vintreſs	viſual
vicious	vintry	vital
vice-admiral	violable	vitalneſs
vice-chancellor	violate	vitiate
vice gerent	violation	vitious
vice roy	violence	vitiouſneſs
vice-royalty	violent	vitreal
vicinity	violentneſs	vitreous
vicinage	violin	vitrify
viciſſitude	violencello	vivace
victim	viper	vivacious
victor	virgo	vivacity
victorioufly	virgin	Vivan
victory	virginals	vivid
victualler	Virginia	vivification
victuals	virginity	vivify
Vienna	virid	vivaparous
view	virile	vixen
vigil	virility	vizard
vigilant	virtual	ulcerate
vigorous	virtuoſo	ulceration
vigour	virtuouſly	ulcerous
vileneſs	virulency	ullage
vilify	virulent	ulnage
village	virulently	ulterior
villager	virulentneſs	ultimate
villainous	viſage	Ulverſton
villainouſly	viſera	umber
villainy	viſcount	umbrage
Vincent	viſcounteſs	umbrella
vincib'e	viſcous	umpire
vindication	viſcouſneſs	unacceptable
vindictive	viſibility	unaccountable

UNC	UND	UNH
unaccuſtomed	uncivil	undreſs
unacquainted	unclaſp	unduly
unactive	unclean	undutiful
unadviſed	unclothe	uneaſy
unaffected	uncomfortable	uneloquent
unaided	uncomely	unemployed
unalterable	uncommon	unequal
unanimity	unconcerned	unerring
unanſwerable	unconceivable	uneven
unarmed	uncondemned	unexecuted
unarrayed	unconformable	unexpected
unaſſiſted	unconquerable	unexpert
unattentive	unconquer'd	unexpreſſible
unattainable	unconſcionable	unfairly
unavoidable	unconſtant	unfaithful
unawakned	unconſtrained	unfaſhioned
unawares	unconteſtible	unfaſten
unbecoming	uncontrolable	unfeigned
unbegotten	uncorrected	unfenced
unbelief	uncover	unfiniſhed
unbelieve	uncourteous	unfitted
unbend	uncrowned	unfold
unbidden	unction	unformed
unblameable	uncultivated	unforeſeen
unblind	uncuſtomed	unfortified
unbloody	undaunted	unfortunate
unboiled	undecided	unfound
unbooted	undefiled	unfriendly
unbound	underling	unfruitful
unbowel	undermine	ungainful
unbridled	underſtood	ungarniſhed
unbuilt	undertake	ungenteel
unbottom	undervalue	ungird
uncapable	undervalument	ungodlineſs
uncertain	under written	ungovernable
unchangeable	undeſerved	ungracious
uncharitable	undetermined	ungrateful
unchaſte	undiſciplined	unguent
unchriſtened	undiſtinguiſhable	unhabitable
unchurched	undivided	unhandſomely
uncircumſpect	undoubted	unhandy

U N M

unhappily
unhappy
unharbour
unharnets'd
unhealthful
unhealthy
unhealthily
unheard
unholy
unhook
unhorſe
unhusbanded
unicorn
uniſon
unitarian
univerſe
unjuſt
unkind
unknown
unladed
unlamented
unlawful
unclean
unlearned
unleavened
unlicenſed
unluckineſs
unlimited
unload
unlooſe
unlovely
unlucky
unmanly
unmanlineſs
unmannerly
unmarried
unmaſked
unmatch
unmeaſurable
unmeetneſs
unmerciful

U N R

unmindful
unmoleſted
unmovable
unmould
unnatural
unneceſſary
unneedful
unoccupied
unoppoſed
unorderly
unpaid
unparallel'd
unpardonable
unpeaceable
unpeople
unperceivable
unperfect
unpleaſing
unpoliſhed
unpolled
unpremeditated
unprejudiced
unprepared
unprevented
unprofitable
unproſperous
unprovided
unpruned
unpuniſhed
unpurged
unquenched
unquiet
unravel
unready
unreaſonable
unrebukable
unreclaimed
unreformed
unregarded
unrelenting
unremitted

U N S

unremoved
unrepaired
unreſolved
unreſpectful
unrevenged
unrewarded
unrighteous
unruly
unſaddle
unſafe
unſaid
unſaluted
unſanctified
unſatisfactory
unſavory
unſcriptural
unſealed
unſearchable
unſeparable
unſerviceable
unſettled
unſhaded
unſhaken
unſhaven
unſhod
unſkilful
unſnared
unſociable
unſolder
unſolid
unſound
unſpeakable
unſpent
unſpotted
unſtable
unſtained
unſteady
unſtirred
unſtop
unſtring
unſucceſsful

UNW URG WAL

unſuitable
unſure
untaken
untamed
untangle
untanned
unteachable
untenable
unthankful
unthanking
unthoughtful
unthriftily
until
untilled
untimely
untoward
untractable
untried
untrimmed
untrue
untruth
untruſtineſs
untunable
unvail
unverſed
ununiform
unuſual
unuſually
unutterable
unwarily
unwary
unwaſhen
unwaſhed
unwater'd
unwearied
unweariedneſs
unwedded
unwelcome
unwholſome
unwholſomeneſs
unwieldineſs
unwilling
unwind
unwiſe
unworn
unworthy
unwound
unwritten
unyoke
vocabulary
vocal
vogue
voice
void
voider
vidneſs
volacious
volatile
volition
voluble
volume
voluntary
voluntier
vomit
voracious
votary
votive
voucher
vouchſafe
vow
vowel
voyage
upbraid
Uphilhaven
upright
uproar
upſide
upſtart
Upton
upward
urbanity
urge
urgent
urinal
urine
urn
Urſulines
uſage
uſance
uſe
uſeful
uſher
Uskmouth
uſual
uſurp
uſurpation
uſurer
uſury
utenſils
urible
utmoſt
Utopian
utter
vulnerable
vulnerary
vulpine
vulture
uvula
Uxbridge
uxorious
uxoriouſly
uxorioufneſs
Uzziah
Uzziel

W

Waggoner
Wainfleet
wainſcot
waiter
waiward
Wakefield
wakeful
Wales

WAS	WAY	WED
Walfleet	waſt	way-wood
Walgrove	waſte	we
wall	waſtefully	weak
Wallaſſe	waſtefulneſs	weaken
wallet	Wat	weakly
Walloons	watch	weakneſs
wallop	watcher	weal
wallow	Watchet	weald
wallowſhip	watchful	wealth
Walner	watchfully	wean
walnut	watchfulneſs	weaning
Walſingham	water	weapon
Walton	water-meaſure	weaponleſs
wamble	water-poiſe	weapon ſlave
wander	waterage	wear
wanton	watergang	wearied
wantonneſs	wateriſh	wearily
war	wateriſhneſs	wearineſs
Warbridge	watery	weariſome
warden	Watford	weariſomeneſs
wardenſhip	Wath	weary
wardmote	Watling-ſtreet	weaſand
wardrobe	Watlington	weaſal
Ware	wattle	weather
warfare	Wattleton	weather by
warineſs	Watton	weather-board
warm	wave waver	weather-cock
warmneſs	waveringly	weathergage
Warnford	wavy	weather-glaſs
warrant	wawl	weather-wile
warrener	wax	weave
Warrington	waxen	weaver
Warſop	Waxham	web
Warwick	way	Webſter
waſh-bowl	waytaring	wed
waſp	Wayhill	wedding
waſpiſh	waylay	wedge
waſpiſhly	waylayer	Wedley
waſpiſhneſs	St. Waynard's	wedlock
waſſel	wayward	Wedmore
waſſelers	way	Wedneſday

W N E

weed
weeder
Weedom
week
weekly
weel
ween
weep
weeper
weeping
weevil
weigh
weight
weightily
weightineſs
weighty
Welch
Welchpool
welcome
welcomeneſs
weld
welding-heat
welkin
well
well-a-day
well born
well bred
well hole
Wellinborough
Wellington
Wellow
Wem
Wemworthy
Wells and Palace
well ſet
welt
welter
wemb
wen
wench
wencher

W H E

Wendover
Wenlock
went
Wentbridge
wept
were
Weremouth
were wolf
weſand
Weſel
Weſt
Weſtbury
Weſtcheſter
weſterlineſs
weſterly
weſtern
Weſtlow
Weſtminſter
Weſtmoreland
Weſton
Weſton-Zaland
Weſtphalia
Weſtram
weſtward
wet wether
Wetherby
wetneſs
wet-ſhod
wetted
wey
Weymouth
whale
wharf
wharfage
wharfinger
Whaley
what
Whateley
Whatton
wheal
wheat

W H I

wheaten
Wheatly Bridge
Wheatly-North
wheedle
wheedler
wheel
wheelage
wheelbarrow
wheeler
wheelwright
wheeze
whelk
whelm
whelp
whelpiſh
whelve
when
whence
whenſoever
where
whereas
whereby
wherefore
wherein
whereof
whereſoever
whereto
whereupon
wherewith
Wherwell
wherret
wherry
whet
whether
Whet-ſtone
whey
wheyiſh
which
whichſoever
Whicknor
whiff

W H I	W H U	W I L
whiffler	white-meats	why
whig	whiten	whick
whiggiſheſs	whiteneſs	wicked
whiggiſm	White Pariſh	wickedly
while	whither	wickedneſs
whiles	whitherſoever	wicker
whilom	whiting	wicket
whilſt	whitiſh	Wickliff
whim	Whitland	Wickliffians
whimſical	whillow	Wickomb
whimſically	Whitminſter	Wickware
whimſicalneſs	Whitſtable	widdle-waddle
whimſy	whitſter	wide
whim-wham	Whitſunday	widely
whindle	Whitſuntide	widen
whine	whittle	wideneſs
whip	Whittleſey	widgin
whipper	Whitton	Widington
whipſaw	Whittingham	widow
whipſter	Whitwell	widower
whipſtaff	whize	widowhood
whirl	who	width
whirl-bone	whole	wield
whirligig	wholly	wieldineſs
whirl-pool	wholſome	wieldy
whirlwind	wholſomely	wife
whiſh	wholſomeneſs	wig
whisk	whoſoever	Wigan
whiſker	whoo	Wigborn
whiskingly	whoop	wight
whiſper	whore	Wighton
whiſperer	whoredom	Wigmore
whiſt	whoremonger	Wigton
whiſtle	whoriſh	Wilcot
whiſtler	whoriſhly	wild
whit	whoriſhneſs	wild-creature
Whitchurch	whorlbat	wilderneſs
Whit-Down	whortle	wildfire
white	whoſe	wilding
white-hart	whoſe-ſoever	wildly
white-liver'd	whur	wildneſs

WIN	WIT	WON
wile	Winfred	withholden
Wilfred	wing	within
wilful	winged	without
wilfully	wink	withſay
wilfulneſs	winnow	withſtand
wilily	Winny	withy
wilineſs	Winſlow	witneſs
wily	Winſom	wittal
wilk	Winter	withwal
will	Winterborn	Witney
William	winter green	Wivelſcomb
Wilſing	winterly	wizard
willing	Winterton & Neſs	wo
willingly	wipe	woad
willingneſs	wire	Woburn
willow	wire-drawer	Woden
Wilmſton	Wireham	woe
Wilms-comb	Wirkſworth	woer
Wiltſhire	wiſacre	woful
wimbla	Wisbich	wofully
Wimbleton	wiſdom	wofulneſs
wimple	wiſe wiſely	wold
Winard	wiſh	wolf
Wincaunton	wiſhfully	wolf's-bane
wince	wisket	Woller
winch	wiſp	Wollot
Winchcomb	wiſt	Wolrich
Winchelſey	wit	Wolſingham
Winchelter	Witborn	wolviſh
wind	witch	woman
wind bound	witchcraft	womaniſhneſs
winder	witch elm	womanly
windfal	with	womb
Windham	withal	Wombwell
winding	Witham	won
windlaſs	Witham-South	wonder
Windleſs	Witheridge	wonderful
window	withdraw	wonderfully
Windſor & Caſtle	wither	wonderfulneſs
windward	Witheram	wonderment
wine	withhold	wont

WOR WRE YAR

wood
Woodbridge
wooden
woodenly
Woodhall
Woodland
Woodley
woodmonger
woodpecker
woodroof
Woodſtock
woodineſs
woodward
woody
woof
wool
woollen
woolly
woolſtaple
Woolwich
wop-ey'd
Worceſter
word
work
worker
workman
workmanlike
workmanſhip
Workſop
world
worldly
worm
worm-eaten
worm-ſeed
Wormſhead
wormwood
worn
worry
worſe
worſhip
worſhipful
worſhipfully
worſhipper
Worſop
worſt
worſted
wort
worth
Worthen
worthily
worthineſs
worthleſs
worthleſneſs
worthy
wot
Wotton
wove
would
wound
woundily
wound wort
woundy
wrack
Wragby
wrangle
wrangler
wrap
wrapper
wrapt
wrath
wrathful
wrathfully
wrathfulneſs
wreak
wreath
wreck
wren
wrench
wreſt
wreſtler
wreſtling
wretch
wretched
wretchedly
Wrexham
wriggle
wright
wrimple
wring
wrinkle
Wrinton
wriſt
wriſtband
write
writer
writhe
writhen
written
wrong
wrongful
wrongfulneſs
wrongfully
wrote
wroth
Wrotham
wrought
wrung
wry
wryly
wry-necked
Wulput
wyche
wydraught
Wye
wyven
wyver

Y

Yatch
yap
yar
yard

15 63 MAR

THE

CONTENTS.

A Compendious Engliſh Grammar Page 1
Directions for Writing 11
How to make a pen 15
A receipt for the beſt black ink 16
To make London ink powder ib
To make Japan or ſhining ink ib
A powder ink to rub on paper and write on 17
How to make red ink ib
To keep ink from freezing or moulding ib

Copies for Writing.

Single line copies in proſe in an alphabetical order ib
Copies in verſe 25
Of the points, or ſtops, and other marks uſed in writing and reading, with their characters, places, and ſignifications 26
Of abbreviations 28
To write on paper gold letters called ſhell gold 30
How to write ſecret letters ib
Another way to write ſecret letters 31
How to write both blue and red letters at once, with the ſame ink and pen, and upon the ſame paper ib
A poem in praiſe of writing 32
A curious collection of letters on compliment buſineſs, and ſeveral other occaſions ib

Precedents in Law and Buſineſs.

Superſcriptions for letters 63
Directions for the beginning of letters 64

CONTENTS.

Of wills and teſtaments	Page 64
Form of a will	65
Another will	66
Obſervations concerning wills and teſtaments	67
The form of a letter of attorney, to execute a particular buſineſs	68
A form of a revocation of a letter of attorney	69
The form of an indenture	ib
A letter of attorney from a ſeaman	70
A bond and the condition	71
A condition to ſtand to the award of arbitrators	72
The form of an umpirage of award	73
A letter of licence to a debtor	ib
A bill of ſale	75
A general releaſe	76
Of wives, children and ſervants	ib
Of ſons and daughters	78
Of ſervants	79
Forms of Receipts, Bills, Notes, &c.	
Various forms of acquittances, when an apprentice or ſervant receives money for the uſe of his maſter or employer	79
Forms of acquittances, upon receipt of money, by maſters and men of buſineſs	81
Promiſſory notes by bankers apprentices and ſervants	82
Promiſſory notes for a man's ſelf	83
A bill of debt	84
Another	ib
Promiſſory notes	85
Arithmetic in all its branches	86
The menſuration of plain ſuperficies (or flat meaſure) ſuch as board, glaſs, wainſcot, painting and the like	201
A ſhort and eaſy method of book-keeping after the Italian manner	206
Accompts ready caſt up for buying or ſelling any commodity by number, weight or meaſure	233

CONTENTS.

The use of the tables with examples	Page 242
A compendium of geography	243
A table shewing the parallel of latitude, the treadth and length of the day in every climate	244
A description of the world	245
Europe	249
Asia	257
Africa	261
America	264
British islands	267
An account of the several counties of England, with their produce, market towns and market days	268
The management of horses	298
Rules for buying horses	*ib*
Rules for travelling, with directions for preventing and curing the diseases horses are incident to on the road	300
How to save a horse's back from galling	302
On the navel gall	303
How to cure a crush on the navel gall	*ib*
Of swelled legs	304
Of scratches	305
Of gravel in the hoof	306
On a clap in the back sinew	307
Of strains in the fillets	309
Of windgalls	*ib*
Of colds	310
Of couring or immoderate purging	312
Of a cold in the head	313
Of a hurt on the eye	314
Of a swelled neck	315
Of the gravel	316
The art of painting in oil	317

A catalogue of the ſeveral colours uſed therein 317
How to make ſize for the gilding both with gold and ſilver 319
The art of working oil colours, and painting timber work, after the manner of common painting 320
What colours are moſt ſuitable and ſet off beſt with each other 322
Of ſome colours that ariſe from mixture 323
How to gild with gold on an oily ſize either letters or figures, &c. 324
How to gild with ſilver 325
Some directions for mixing of oil colours for divers purpoſes, in the art of colouring prints with oil colours 326
Colours for faces *ib*
——— for hair *ib*
——— for garments 327
——— for trees *ib*
——— for grounds behind a picture 328
——— for ground in a landskip *ib*
Sky colours *ib*
The whole art and myſtery of colouring maps and other prints in water colours *ib*
Of the practice of colouring maps 332
Directions how to lay on metzotinto prints on glaſs 333
Exports and imports of Great Britain to and from foreign nations 3
Alphabetical liſt of Engliſh manufactures, with the beſt markets for the purchaſe of them 339
Tables ſhewing the value of Portugal pieces, &c. in pounds, ſhillings and pence ſterling 342
Tables of the two great roads from Edinburgh to London 344
Curious fire works 345
An Engliſh ſpelling dictionary 356

YEO

yard-arm
yard-land
yare
Yarmouth
yarn
Yarriſh
yarrow
Yarum
yaſpin
yate
yaw
yawl
yawn
yaws
Yaxley
ye
yea
yean
year
yearling
yearly
yeaſt
yelk
yell
yellow
yellowiſh
yellowiſhneſs
yelp
yelt
yeoman
yeomanly
Yeovil

YUL

yerk
yerker
yern
yes
yeſterday
yeſternight
yet
yew
yexing
yield
yieldingneſs
yoke
yoke-fellow
yoker
yon
yonder
yonker
yore
York
Yorkſhire
you
young
younger
youngling
youngſter
your
youthful
youthfully
youthfulneſs
yule
yule block
yule-game

ZOU

yule-time

Z

Zabulun
Zacharias
Zagay
Zany
zeal
zealot
zealous
zealouſly
zealouſneſs
Zechariah
zedoary
Zealand
Zell
Zelotes
zineth
Zephyrus
Zereth
zeſt
zeta
Zeugma
Zink
zodiac
zone
zoography
zoology
zootomy
zoophyte
Zouch

A TABLE of the most familiar Proper Names of MEN and WOMEN.

A
Abel
Abraham
Alexander
Ambroſe
Andrew
Anthony
Arnold
Arthur
Auſtin
Auguſtus

B
Barnaby
Bartholomew
Benjamin
Bernard

C
Cæſar
Charles
Chriſtopher
Clement
Conſtantine

D
Daniel
David
Dennis
Dunſtan

E
Edmund
Edward
Eleazar
Elias

F
Ferdinand
Francis
Frederick

G
Gabriel
George
Gervas
Giles
Gilbert
Gregory

H
Henry
Horatio
Hugh
Humphrey

I
Jacob
James
John
Jeffery
Jeremy
Jonathan
Joſeph
Joſias
Joſhua
Iſaac
Jude
Julian

L
Lambert
Lancelot
Laurence
Leonard
Leopold
Lewis
Luke

M
Malachy
Mark
Martin
Matthias
Matthew
Maurice
Michael
Moſes

N
Nathan
Nathaniel
Nehemiah
Nicholas

O
Oliver

P
Patrick
Philip
Peter

R
Ralph
Raphael
Raymond
Reynold
Richard
Robert
Roger
Roland

S
Samuel
Samſon
Sebaſtion
Sigiſmunda
Silveſter
Simeon
Simon
Solomon

T
Theodore
Theodoſius
Theophilus
Thomas
Timothy
Toby

V
Valentine
Vincent
Urban

Z
Zachary

NAMES of WOMEN.

A
Abigail
Alice
Agnes
Amelia
Ann
Arabella

B
Barbara
Beatrice
Betty
Bridget

C
Caroline
Catherine
Cecily
Charlot
Chriſtian
Conſtance

D
Damaris
Deborah
Diana
Dinah
Dorothy

E
Eleanor
Elizabeth
Eſther

F
Flora
Frances

G
Gertrude
Grace

H
Helen
Henrietta

I
Jane
Joan
Iſabel
Judith

L
Laura
Louiſa
Lucy
Lucretia

M
Magdalen
Margaret
Margery
Mary
Martha
Maud

P
Penelope
Phyllis
Priſcilla
Prudence

R
Rachel
Rebecca
Roſamond
Roſe

S
Sarah
Sophiah
Suſanna

T
Thereſa

U
Urſula

FINIS.

15 63 MAR